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ORIGINAL ARTICLES.

FEEDING IN THE WASTING DISEASES.

A Report Presented to the Committee of Dietetics of the American Medical Association at its Forty-first Annual Meeting, 1890.

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First Section—Tuberculosis Pulmonalis, One Hundred Cases.

Second Section.—The Fatty and Fibroid Degenerations, Fifty cases.

Third Section.—Male Neurasthenia, Fifty Cases.

The following is an abstract:

FIRST SECTION—STATISTICS OF ONE HUNDRED CASES OF CONSUMPTION TREATED BY FOOD PLANS TO BE HEREAFTER DESCRIBED.

Résumé.

Series 1. Non-arrests, twenty-one cases.

a. Cases that were not improved, nine.

b. Cases that were on partial diet, or were too irresolute, or had bad surroundings, financial, climatic, etc., twelve.

Series 2. Partial arrests, thirty-nine cases.

a. Cases that followed the treatment faithfully, nineteen.

b. Cases that did not follow the treatment faithfully, nine.

c. Cases that had bad surroundings, that died of pneumonia, etc., eleven.

Series 3. Permanent arrests, forty cases.

a. Tuberculosis, thirty-two cases.

b. Pretuberculosis, eight cases.

In 1880, the senior writer presented to the American Medical Association, an article entitled, "The Salisbury Plans in Consumption," with the full text of seventy cases. To-day we come before you not to laud or condemn Dr. Salisbury, but to simply give you in the concrete, what has been brought before us in our daily work with consumption of the lungs, as we have attacked the disease believing it to be first and last a food disease, climate and other causes being entirely secondary, and therefore this contribution will be of the more value to this Committee of Dietetics.

SERIES 1.—NON-ARRESTS, TWENTY-ONE CASES.

a. Cases that were not improved, nine.

1. *Illustrative Case.* — (See Transactions American Medical Association, 1880, pp. 333-408, case 7.) August 28, 1877, M. H. S., fisherman, Lanesville (Cape Ann, Mass.), aged 33 years. Father died of phthisis. Mother living; been sick two months. He states that he took cold and went out fishing. Was exposed and took more cold; except two attacks of typhoid fever, was perfectly well before. General appearance bad. Cough is constant and severe. No hæmoptyses. No dyspnœa except on going up stairs. Severe pain in shoulders. Appetite poor. Bowels regular. Has lost flesh and strength. Night sweats copious. Pulse weak. Hands shake badly.

Physical Signs.—Dulness on percussion and crackling over right upper third front and lower third back; feeble inspiration, almost flat on percussion; no crackling, but the respiratory murmur was heard underneath. Inspection of the blood revealed spores and spore collects in abundance. Fibrin filaments thickened. Red corpuscles adhesive, sticky, irregularly massed, pale in color. Mr. S. went upon the treatment with quinine. It was his intention to come up from the Cape again, but he was unable to do so, and despite the means used, he died not long after.

Remarks.—At the time it did not seem to the writer that his case was hopeless. Still, his history teaches that one must not trust too much to first appearance. It is a disadvantage to see a patient only once. It was reported that he faithfully used the diet. It is well, however, to compare the case with some of the very sick ones that were cured as noted in series 3; the lesson taught is simply that the physician should never refuse to take a case, and should never be too free in his promises of recovery.

b. Cases that were on partial diet; were too irresolute; had bad surroundings, financial, climatic, etc., twelve.

Illustrative.—(See case 1, loc. cit.), widow, aged 43 years, small sized, thin, anxious and nervous. Asthmatic complication, old abscesses of the mediastinum, diarrhœa, dyspepsia, sleeplessness, severe cough, dulness on percussion with constant crepitant râles over both upper thirds

front. Great dyspnœa at times. Abnormal valvular sounds of the heart. No albumen in urine. Altogether the most distressed and suffering case of consumption I had seen for some time. The effect of the animal diet, baths of mineral acids, and quinine, was to relieve, in a measure, the night sweats and abdominal pains. But the appetite turned against the animal food and it would often be rejected by vomiting. She was obliged then to carry out the régime only partially, particularly as she laid all her bad feelings, distresses and sickness to her food or medicine, and never to her disease. She suffered also greatly from prolapsus of the uterus, aggravated by the severe coughing. This case was not relieved by the special treatment recommended. The weakness of mind and body, induced by the presence of organic disease in the thoracic and abdominal viscera, was too great to be reached by perhaps any treatment. Indeed, just here it may be stated that no pretention is made toward cure of any but one-third of the cases;[1] but to insure that proportion it is necessary to have the treatment strictly carried out.

The present case was one in which there was really no hope and only adopted as "A drowning man catches at a straw." It is thought best here to give simply the bad and good cases together, and let the reader judge for himself of the value of the data thus derived.

SERIES II.—PARTIAL ARRESTS, THIRTY-NINE CASES.

a. Cases that followed the treatment faithfully, nineteen.

Illustrative Case.—(See No. 21, loc. cit.) Mr. W., aged 60, in 1874 had been consumptive for two years; his occupation was that of an overseer of an umber paint mill. He had with a cough, marks of increasing debility, as loss of flesh, animation and courage. There were marked dulness on percussion, crepitant and sonorous râles over the upper part of both lungs; the blood also presented fibrin filaments and spores. It is some years since he has lived upon animal food diet; his wife has faithfully prepared the choicest meats for him, and what is more has encouraged him in pursuing the uncommon diet. The case was rather unpromising at first, owing to its long standing and extent of tubercle infiltration. He is, however (1876), comparatively well. Cough is hardly perceptable. The physical signs are still to be detected, but with less marked characteristics. He attends to his business as usual. Says he expected to die, in which expectation the community shared. The blood shows great diminution in the foreign admixtures. 1879, still living but very feeble. In October he died.

Temporary Arrests.

b. Cases that did not follow the treatment faithfully, nine.

[1] This was 1880, now we think that more can be cured.

Illustrative Case.—(See case 23, loc. cit.) Miss C., aged 22, residence Cape Cod. Seen July, 1875; amenorrhœa, cardiac trouble, dulness on percussion in upper part of both lungs, expiratory râles in same location. Blood was full of evidence of disease as shown by the enlarged white corpuscles, the spores and fibrin filaments; she had been under the hypophosphites of lime and soda. She was put upon the strict diet and mineral acid baths, and was removed to New Hampshire. She was thin in flesh and unable to walk an eighth of a mile from prostration under the necessary effort. For the next three months was not herself thoroughly convinced of the utility of the measures now proposed, still her friends were, and by means of their influence she adhered closely to diet and baths. Immediately there was an improvement in the cough, in flesh and strength which continued. She walked two miles readily. Returned home for a visit in November. Here the diet was abandoned, ate everything she liked and took medicines. Remained at home four weeks. She ran rapidly down, lingering till she felt "She could not live two days." Returning to New Hampshire she improved but little. Remained there till April, 1876, when being very much worse, she returned home to die. Died in 1878. This case shows the power of the system to resist the disease, even when not following up the treatment; this resistance ought to be more relied on.

c. Cases that had bad surroundings; that died of pneumonia, etc., eleven cases.

Illustrative Case.—(See case 27, loc. cit.) In October, 1874, Mrs. ——, a woman with a very young child, that especially cried by night and kept its mother awake, was very pale and thin, coughing severely and raising largely. There was diminished resonance on percussion and crackling throughout the upper third of right lung. She adopted the diet and acid baths. In four months the cough was very slight. The physical signs diminished. Her softened lung tissue dried up. The appearance improved so much that a casual observer would have called her well. All the time she suckled her infant. Owing to the hard times she was obliged to relinquish her diet and would not accept it as a gift. Immediately she began to fail and died in the course of six months. The improvement in health kept pace exactly with the imposed diet. When she ate bread the cough returned; the expectoration was copious. The night sweats reappeared. This shows markedly the relation of animal food to consumption. It is well worth knowing, for if these things "are done in the green tree what may be done in the dry?"

SERIES III.—ARRESTS MORE PERMANENT IN CHARACTER AND MIGHT BE TERMED CURES IF OCCURRING IN OTHER DISEASES.

a. Tubercular, thirty-two.

b. Pretubercular, eight.

Illustrative Case.—(See case No. 53, loc. cit.) Mrs. Wall, Cleveland, Ohio, June 21, 1877. Present condition: Suckling a four months' child. Active and doing her own housework. Looks like a person in ordinary health. Coughs occasionally. No sputa. A good sized, rather flat-chested woman thirty-five years of age. *Chest:* Dulness on percussion and cavernous respiration over left upper third back. Dulness over the whole left back. Elsewhere normal. *Blood:* Inspection showed normal looking blood. Red corpuscles not massed; are distinct, well defined, rouleauxed, no fibrin or mycelial filaments; white corpuscles not enlarged.

This report is more interesting when taken in connection with the following history: In February 1865, Mrs. Wall had been sick in bed four months with the last stages of consumption. She was emaciated to a skeleton; weight, sixty pounds; usual weight one hundred and thirty pounds. Her physicians, who were regularly educated and skillful men, pronounced her left lung "gone"—that is, riddled with tubercle that had softened and broken down in such a manner that the pulmonary substance was removed; had become useless and of course they gave a decidedly fatal prognosis. There was at this time a great caving in or flattening of the anteroposterior diameter of the chest due to atmospheric pressure conjoined with loss of lung substance. At this time she came under Dr. Salisbury's care. The patient's mother caused the treatment to be faithfully and assiduously followed out. Improvement slowly followed. In four months' time she was able to be out of doors and visit the city. After a time she resumed her profession as school teacher and taught successfully for four years. Five years ago she married and has borne three children, all healthy and vigorous. She likes her meat diet best, lives on it and works hard. The physical signs adduced show the marks of the ruin wrought in her lung and also show the tremendous power of food in managing or in affecting the course of organic pulmonary disease even in its third and hopeless stage. This history reads like fiction. November, 1888, we heard from her that she had continued in good health. A beef eater.

Illustrative Case.—(Unpublished.)—1882. Young man. Cavities in both lungs. Heart enlarged. Emaciated as badly as preceding case. Profuse hæmoptyses. Elastic and inelastic lung fibers in sputa. Blood, tubercular. Was treated very carefully on these plans. Was cured, *i. e.* his cough ceased; the lungs healed; the heart regained its normal size; he took on flesh and strength; went through Yale college; was graduated with honors. Is well and was seen by us May, 1890.

Pretubercular Cases Treated that May Come Under This Head.

Illustrative Case.—(See case 65, loc. cit.) In April, 1876, a young man eighteen and one-half years, complained of feeling weak and listless. He had nocturnal and morning cough, with slight expectoration. He was pale, thin, and losing flesh. Consumption was hereditary on both sides of the family. There were no physical signs of pulmonic lesion. Inspection of the blood microscopically disclosed abundant signs of mischief, such as: Fibrin filaments were marked in character; spores and spore collections; mycelial filaments; white corpuscles much enlarged and too numerous; corpuscles, thin, flabby, pale, sticky, outlines not cleanly cut, aggregated. These taken together with the history and the rational signs, induced a diagnosis of the pretubercular stage. Under the use of acid baths and strict diet, the sanguineous and other signs began to disappear, so that in a year he was enabled to proceed to Germany and study music. He has been a beef eater, *i. e.* eats more of it than people usually do; alive and well, 1890.

Rationale.

1. Tuberculosis is a systemic and not a local disease primarily.

2. Tuberculosis is a diseased condition or state due to the presence of yeast in the blood with its fermentative products.

3. The yeast is introduced into the blood through the alimentary canal from starch and sugar in excess, and in a state of fermentation.

4. The physical micrographical conditions found in the blood of tubercular cases constitute the peculiar morphology so often alluded to. The main features are as follows:

a. Spores of vinegar yeast.

b. Spore collects.

c. Fibrin filaments unusually large and prominent.

d. Enlarged massal white corpuscles. This enlargement proceeding from the white corpuscles being unusually fertile niduses of the vegetation, called entophytal, similar examples of which abound in algæ.

e. Deprivation of the red discs of their coating of neurine, thus rendering them sticky, adhesive and singularly inclined to aggregate themselves in confused masses. At the same time they lose their color, their clean-cut outlines and are diminished in number relatively and absolutely.

f. Thrombi formed of the fibrin filaments; of the corpuscles; of the spore collects.

g. All of the foregoing have been photographed with Tolles' objectives, from the one-fourth to his one-seventy-fifth.

5. The vegetation may exist in a latent state.

6. It may be transmitted from parent to child

in the milk, but the greater point of interest is in the tuberculous diathesis, produced by the same feeding in families for generations.

7. The morphology of the blood is commonly present some time during one year before organic disease. In other words, there is a new physical sign of the pretubercular state; the senior writer has a monograph on that subject alone, illustrated with many microphotographs.

8. Food, then, is the agent of tremendous power that causes tuberculosis.

9. The treatment is based on the idea of removing the cause by ridding the blood of the presence of the yeast and its fermentative products by a process of starvation.

10. Tubercle is a secondary product—a result from embolism caused by the minute thrombi of fibrin filaments—of the massal corpuscles and of the spore collects, and also from mechanical and chemical effects of the embolism on the nutrition.

11. The breaking down of the tissues comes from a necrosis caused by this overloading of them with the products of fermentation.

12. The yeast is also found in the alimentary canal, on the skin, in the sputum, etc.

13. Flour has been raised into bread by the dejecta of third stage consumptives.

14. The progress of the case is best watched and studied in the morphology of the blood. The spores are diminished, the filaments removed. The enlarged massal white corpuscles are reduced in size to normal proportions; the red discs acquire their normal color, covering, and clean outlines; the fibrin filaments are hardly visible. Thus the red discs dispose themselves in the normal manner, the more perfectly as the cure proceeds. Any deviation in the regimen is indicated by the increase of the abnormal morphological elements in the blood. As the blood improves, usually the general symptoms improve, *pari passu*. We have often witnessed, under treatment, the disappearance of râles of all kinds, night-sweats, emaciation, the reduction of the heart to normal size and frequency of beats, simply because of taking away the load it had to carry, when the blood was filled with emboli, and was ropy and sticky.

15. This diagnosis by blood examinations does not exclude ordinary physical explorations; it supplements them; we find that the ordinary idea of this diagnosis in the profession is that hæmology is like urinology, and all that is necessary, is to take specimens of blood, just as we do urine, and base all our diagnosis of tuberculosis on such examinations. The very suggestion of this demonstrates how far the proposer is from having a true idea of the subject; the evidence must be collected with the least possible interval of time between the removal of the blood from its stream to the stage of the microscope; the capillary circulation is to be used, not the venus or the arterial; take blood from the radial or ulnar side of the forearm, by slight puncture with scarificator or scalpel; do not prick the end of the finger; the student must study the morphology of the skin as well as that of the blood.

16. There are other diseases in which the normal blood morphology is changed, to-wit: rheumatism, cystinæmia, syphilis, ague, etc.

17. This rationale explains the cough, where it is not due to local irritation in the air-passages, such as hyperæmiæ, ulcers, infiltrations, reflex irritations, to the presence of carbonic acid gas in excess; sometimes it is wonderful how diminishing the fermentation does away with the cough.

18. This rationale explains hæmorrhages as the result of local action of the vegetation on the glue tissues, the connective tissues being softened, disintegrated and broken down by the products of fermentative changes.

19. It explains the night-sweats as due to the interstitial necrosis of tissues thus throwing more work on the skin; hence the injunction to take good care of the skin, and help the lungs while they are being healed.

20. The emaciation and loss of flesh and strength are only the results of the great tissue destruction going on.

21. The sputum must be studied for lung fibers, for the various crystals that are found in asthmatic conditions and also the gravel, granular and encysted.

22. Old fashioned or fibrous consumption is due to holding of the yeast products in the stomach, to the gradual paralysis of the lungs, with the consequent hyperplasia of the connective tissues, and to the deposit of gravel in this hyperplasia of the fibrous tissues; in this condition the blood morphology is not so much altered; the diagnosis must be made on general grounds; the treatment is practically the same, however.

23. The condition of the liver and kidneys can be determined by watching the urine; it should be tested at least twice a week and kept at a specific gravity of 1015 to 1020, free from bile, odor or deposit.

24. Physiologists say that man cannot live on beef alone; the chemist says that beef contains all of the elements found in the tissues of the human body. We say, that in cases of consumption, Bright's disease, uterine fibroids, etc., where the special case has indicated a rigid diet of beef, such a dietary has been ordered and some of the patients have lived on it alone for four years; thus the dictum of the physiologist is upset.

25. It has been sneeringly said that all that was needed if the ideas here given as to consumption are true, that a man prescribe beef and hot water; yet the senior writer had his son study

the general sciences four years, medicine four more, and special cases three more years, before he was willing to leave his practice in his care; the art of treating chronic disease, even by positive food plans and judicious medication, is an extremely hard one to acquire.

26. Air is food. Yet consumptives have been cured in the rawest and dampest climates, and so many times that we must go behind the old idea that climate was the only cause of consumption; granted that bad climate helps to cause the disease, and so also will worry, trouble, grief, assist toward death; the sending of patients away from home comforts to die elsewhere is not the thing to be advised. If home comforts, good air and the proper food can be combined, by all means do it. This is written with the knowledge that pulmonary disease has been arrested by climate. But our aim is to cure the cases wherever they are, because many cannot afford to change their climate or live the remainder of their lives in the Adirondacks or Colorado.

27. Remove from the atmosphere of the patient all doubters, sneerers and those that argue, but never cure; agnostics and nihilists, not content with helping no one, they will endeavor to pull down your work. More permanent arrests could have been secured of these one hundred cases if the patient had been left alone.

28. While encouraging the patient at all times and in all emergencies, give him to understand what he is fighting; that he must not waste his nerve forces by needless thought and worry, but to hold on persistently and wait for nature to do the work; each case is a law unto itself; this can be seen by the study of the cases herein recorded; we are finite; death is certain; no man will ever cure 100 per cent. of his cases, may we say of any disease.

29. If all will take hold firmly, at least 50 per cent. of tubercular cases can be cured, judging from our own clinical experience. Now that consumption is called a curable disease, the great load is lifted off and much more will be accomplished.

30. All cases of pretuberculosis ought to be cured, because here is a condition where there has been no destruction of tissue; this is where the exception to section 28 comes in, if, the practitioner will diagnosticate the condition, treat scientifically, and the patient obey orders.

31. All physicians who say these plans are foolishness, and who treat their cases by morphine, maltine and whiskey, we ask for publication of cases and the percentage of cures.

32. The diagnosis of tuberculosis by blood examination, often negatively points out the seat of trouble to be in the heart or uterus, or perhaps some other organ; also, cases of uterine disease complicated with tuberculosis should not be allowed to go untreated, but in making examination, the physician must go over the whole field, and find out all of the disease; some of the cases in this series, years ago, would have been benefited if their uterine disease had been treated; granted the cause is systemic, for bad food is an etiological factor of uterine diseases, while treating systemically, use all of the modern means to attack the local pelvic troubles.

33. If men complain and say this dietary is too rigid, we will only reply that the cases have demanded it, and will be very thankful when consumption can be cured by more pleasant means than we have employed.

34. Lastly, as to Koch: In 1876 all of the morphology of consumptive blood was photographed with Tolles' objectives to the highest power, his one seventy-fifth. These microphotographs have been exhibited here and abroad, and we find none that equal them; this is written advisedly.

Bacteriology is but an extremely small portion of the micrological world. Such algologists and phytologists as Professor Paulus F. Reinsch, of Erlangen, and Dr. Fr. Ecklund, physician of the first class of the Royal Navy, Sweden, endorse this work as covering a much larger field than bacteriology does. If the proof was to be placed entirely on the results, then bacteriology must hold its head in shame, as no cures have been effected by it; but we are willing to controvert Koch on scientific grounds, and maintain the position that he has told but one-half the story; that botanists have been fighting for years as to whether bacteria were simply babies of the fuller fledged vegetations; that the bacillus was photographed in 1876; that the ability to diagnosticate pretuberculosis and tuberculosis by blood examinations, and the means thus afforded of watching the cases, are worth immeasurably more than the diagnosis of consumption when the disease is apparent to all.[1]

SECOND SECTION—THE FATTY AND FIBROID DEGENERATIONS.

1. Bright's disease, twenty cases.
2. Fibroid tumors, eighteen cases.
3. Cancer, twelve cases.

SERIES 1.—BRIGHT'S DISEASE, TWENTY CASES.

We do not consider any case full-fledged Bright's disease unless there are in the urine albumen, casts and fatty epithelia.

We are continually getting cases which may have any one or two of these three signs. Such cases are hovering on the border line of health and well-marked disease, and are very amenable to treatment. Such wavering from health would oftener be detected if physicians would make more thorough examinations of the urine. Tak-

[1] We are ready to demonstrate, by microphotographs, facts as to the relations of the bacteria to alcoholic and acetic acid plants.

Fig. 1.

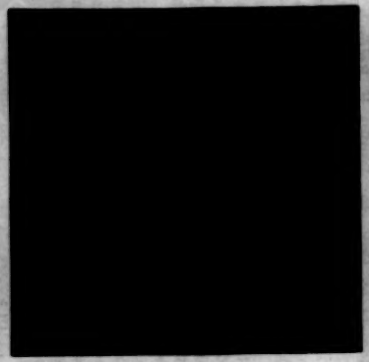

Fig. 4.

Fig. 3.

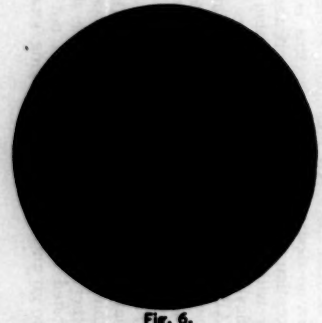

Fig. 6.

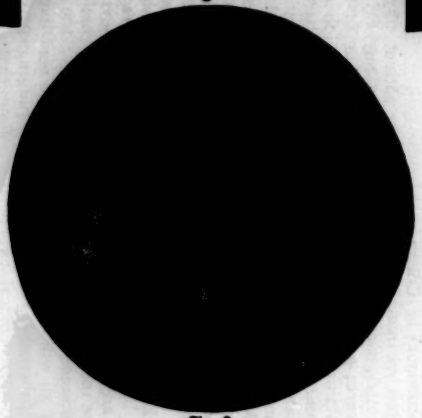

Fig. 2.

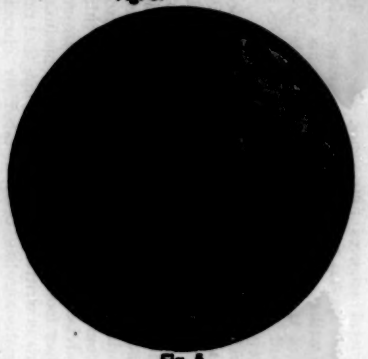

Fig. 5.

FIG. 1.—Microphotograph, 1-50 inch objective, Tolles. E. Cutter, 1876. Healthy blood.
FIG. 2.—Microphotograph, 1-16 in. objective, Tolles. E. Cutter, 1883. Healthy blood.
FIG. 3.—Microphotograph, 1-16 in. Tolles objective. 1876. Tuberculous blood under treatment showing improvement and attempt to rouleaux rightly.
FIG. 4.—Microphotograph, 1-50 in. objective, Tolles. E. Cutter, 1876. Fibrin filaments in tuberculous blood.
FIG. 5.—Sticky, ropy and adhesive blood, tuberculous. 1-16 in. objective, Tolles. E. Cutter, 1876.
FIG. 6.—Three enlarged white blood corpuscles, the fourth ruptured with spores vinegar yeast. 1-75 inch objective, Tolles. First ever taken; by Dr. Ephraim Cutter and G. B. Harriman, D.D.S., of Boston, 1876.

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ing six specimens from six consecutive days, it is wonderful to see the variance from day to day.

The following is an abstract:

Cases that would have been diagnosticated earlier if they had been more fully examined.

1. 1883, woman, 30. Called tuberculosis; blood normal; urine albuminous, and contained casts and fatty epithelia; sputum copious. Bright's disease lungs and kidneys; not treated. The urine had not been examined before in this case.

2. Man, aged 50, 1885. Bright's and diabetes. Disease had not been detected. Treatment of no avail; too late.

3. March, 1885. Called nervous prostration by a homœopath. When urine was examined later by senior writer, disease found to be Bright's. Treatment by her cousin of no avail, though a Harvard graduate and thoroughly equipped; again too late.

Deaths.

4. The late Dr. Elsberg. Bright's disease of lungs and kidneys. Great improvement. Death on resumption of old modes of life.

5. Bright's disease of kidneys and lungs. Improvement. Death from handling his own case, thus eating wrongly, overworking and allowing himself to be poisoned by sewer gas.

6. March, 1889; woman, 50. Bright's disease lungs and kidneys. Death September from pneumonia. Disease somewhat arrested.

7. Bright's disease of kidneys; 1885, man, 50. Convulsions like that of a puerpera. Chloroform to neck. Urine cleared up by diet. Took cold from riding in open carriage. Death from bronchitis.

8. Man, 50; October, 1885. Bright's disease kidneys; nearly blind. Case improved; very nervous; services discharged; death in a few months.

In Progress.

9. Man, 60; 1886. Bright's disease kidneys. Great amelioration of pains and improvement of urine. April, 1890, disease returning, and will probably die if work is not given up at which he labors constantly.

10. Woman, 40; 1883. Bright's disease kidneys. No improvement till she came into our family. Then followed diet, and urine cleared up. Disease has returned, though alive April, 1890. Not on treatment.

Cases cured; that is, that are well April, 1890, with kidneys acting rightly.

11. Man, aged 46; January, 1886. Bright's disease kidneys, cirrhosis of liver and enlarged heart. Considered absolutely hopeless.[1]

12. 1880. Acute fatty degeneration kidneys, placenta and cerebral blood vessels. Has since borne two more children.

13. Woman, aged 35; October, 1885. Not as serious as some of the cases.

14. Woman, aged 25; 1886 Unusual large number of casts and fatty epithelia in urine.

15. Woman, middle-aged; 1887. Had decided to transfuse blood. Well April, 1886.

16. 1879. Man, aged 60.

17. 1881. Man, aged 60.

18. 1884. Man, aged 24.

19. Girl, 13; 1884. Scarlatina; menses appeared when eruption was at its height. Two years to get well.

20. Woman, 46; 1886. Fibrous consumption, Bright's disease kidneys and small fibroid tumor of womb. Tumor gone, cough gone, urine normal, April, 1890.

SERIES II.—FIBROID TUMORS, EIGHTEEN CASES.

The following is an abstract:

Tumors Held in Statu Quo.

Three cases. The first: Immense abdominal fibroid, woman aged 60. Shall soon apply galvanism by deep abdominal puncture.

Second: Small tumor; would go away, probably, if woman would allow herself to rest.

Third: Large abdominal tumor, which did not diminish till galvanism was applied by abdominal puncture, though diet helped her very much.

Tumors Reduced and Patients Made Comfortable.

Five cases, all uterine; four, large tumors; the fifth, smaller and back of uterus. All greatly improved; tumors arrested and reduced. These would be called a cure if done by the Apostoli method of giving galvanism; (which method, by the way, was employed by the senior writer in his first operation in 1871).

Tumors That Disappeared.

Ten cases. Seven, uterine fibroids; four, large abdominal tumors; three cases of smaller abdominal and pelvic tumors.

One case of tumor of the breast; one of fibroid of the stomach; one of tumor of the neck which might be called tuberculous.

SERIES III.—CANCER, TWELVE CASES.

The following is an abstract:

1. Cancer of the face, so called by eminent men in the American Medical Association at the Philadelphia meeting, 1847. Treatment by knife and caustic had only made disease return and sore more ugly. Diet of bread and milk removed tumor and healed sore.

2. Tumor of scapula as large as a pint bowl. In the practice of the late Dr. Amos Twitchell, case 1 of this series. Diet of bread and an infusion of water dock. Disappearance of tumor.

3. Attendant, E. Cutter. Woman, 40; uncle dead of cancer; her case, cancer of womb. Disappearance of growths by rigid diet of beef.

4. E. Cutter, attendant. Woman, aged 50.

[1] The result is understood to be according to the reading of the heading.

Cervix enlarged laterally to sides of pelvis; rough and bleeding; opium eater. Rigid diet; iodoform locally. Great improvement. Death on discontinuance of treatment and resumption of opium.

5. E. Cutter, consultant. Cancer of carpal bones and axillary glands; 1882; said to be hopeless by attending physicians. Amputation at middle third of forearm; animal food diet. Alive 1890. Disease in axilla quiescent.

6. E. Cutter, attendant. Woman, 35. Cancer of womb. Improvement and arrest of disease. Discontinuance of treatment; death.

7. Woman. Attendant, E. Cutter. Sister case 6. Knobbed enlargements of os and cervix uteri. Strict diet; disappearance of tumors; alive eight years later.

8. E. Cutter, attendant. Cancer of womb; discharged from hospital to die of that disease, 1882. Reduction and disappearance of disease by diet. Well April, 1890.

9. Attendant, E. Cutter. Woman, 40. Four tumors back of womb. Valvular disease heart. Tumors disappeared by rigid diet of beef; this in 1876. Woman alive and well April, 1890. Her father had died of cancer of stomach.[4]

10. Attendant, E. Cutter. Disease in both breasts. Tumors diminished in size by diet. Caught cold from exposure; pleurisy; cancer cells found in fluid aspirated from chest; death.

11. Man, aged 60. E. and J. A. Cutter, attendants latter part of illness. Cancer of larynx. Tracheotomy had been done; wore tube; suffered much pain. Wished to try food treatment. Did little good, as he could eat but little, and that finally fed to him through a catheter in fluid form. Literally starved to death. A man of great heroism, the late Dr. Wm. S. Hurlocke, of Philadelphia.

12. E. Cutter, attendant. Woman, 40; 1881; vomitus composed of a black grumous fluid; tumors of womb and stomach. Relieved and in fair health April, 1890.

Rationale.

We would have liked to have presented more of our cases of Bright's disease, tumors and cancer; but space does not permit. A few words must be given as to our ideas in attacking these cases mainly by food.

The word nephritis gives us little light as to the real causes of Bright's disease. We would say as to our belief, that the disease is commonly an expression of a systemic condition; either a fatty or a fibroid degeneration. That the fatty may be acute or chronic; the fibroid most always chronic. Some have thought because they found ganglia fattily degenerated that the renal disease was the sequence. But we ask what was the cause of the ganglionic degeneration?

The answer is: In the food eaten, in the air breathed, in the modes of life, the clothing worn, the amount (too much or too little) taken of exercise; our ways of thought, of carrying on our business; whether we are intemperate, etc. In these long continued and steadily acting causes is to be found the explanation—and until the causes of disease are understood, few men will treat them intelligently and successfully.

The cases that we have treated have been studied as far as we were able, on all sides; we wished to know all that could be found out about the patient's life. This may seem too simple, but gentlemen, concrete things, not abstract, cause disease. But to be more particular, let us consider the food part of the question. Starch and sugar contain but three chemical elements; yet they make up a large part of the diet of many.

The old saying is that "you cannot get blood out of a stone." Certainly phosphorus and nitrogen, to say no more, cannot be made out of carbon, hydrogen or oxygen; so on the side of chemistry alone, if a man or woman will persist in feeding on starch and sugar, they must not expect nature to break her laws and change her elements into others.

But, the excessive feeding of starch and sugar will in time produce the carbonic acid, and later on acetic acid fermentations in the alimentary tract. Carbonic acid gas is a poison, it paralyzes and kills men and animals when breathed; yet how many live with their stomachs bloated with this gas, wonder why they have heartburn, and their families mourn when they drop suddenly in the street from heart paralysis due to this same gas; or they keep on their way, living in spite of their vicious feeding, and the long continued paralysis may result in a fibrous degeneration of the lungs, the stomach, the liver, the kidneys or the spinal cord; or nature, instead of building fibrous tissue under this slow-going paralysis (for it is well to remember that nature does her best always), will lay in fat in these tissues and keep the bulk of them intact as long as she can.

A man on treatment for locomotor ataxy was much improved. Meeting a friend on Fifth Avenue, he said: "I want to go into Delmonico's and eat a big dinner; will it hurt me?" His friend was a physician, but knew nothing about his treatment; he however said "It will not hurt you." The man followed his advice, filled himself up with fermenting and fermentable food, with the result that the ataxia came back immediately—why, because the spinal cord was temporarily paralyzed by the carbonic acid gas. The same thing we have seen within a year in the case of a boy on treatment for the same trouble; his fond mother let him have ice-cream and a big dinner, and his legs were almost immediately paralyzed.

April, 1890, this boy is as bright and lively as most any of his age.

[4] For full account of these nine preceding cases see Albany Medical Annals, July and August, 1887, "Diet in Cancer," E. Cutter.

The various fibroid tumors are also instances of degeneration. Nature is doing her best, but she cannot lay down healthy tissues, so she builds with the poorest, to wit, the fibrous tissue. If this is not so, gentlemen, why did our cases recover? Granted we kept them quiet (when we could) and used every medical means our humble knowledge permitted us to prescribe; yet the main idea, and held to firmly, was that these were diseases of nutrition and must be attacked on that ground.

Cancer.

A woman of fine mind was attacked by two tumors in her 60th year, one just anterior to the right ear, the other below the right breast. By careful attention to diet, so that she lived plainly, by the use of alcohol baths, and by keeping her life in as even a tenor as possible, she lived till she was over 90, and then died of her disease which was called cancer. The tumor on the head had extended to the external angle of the eye; the tumor on the breast killed her.

A boy æt. 10 years, an orphan, picked up a precarious living setting up tenpins in a billiard alley; he was beaten with one and thrown out; the disease (fungus hæmatoides) commenced; when found, he was on the railroad track. The town authorities supported him as a pauper, and the disease before his death took in a great part of his body.

A woman carried for thirteen years a large abdominal multilobular, subperitoneal and pelvic fibroid. One early spring she was compelled to move into a house situated in marshy lands which had not been used during the winter. She took cold, was overworked, and the disease changed into cancer, attacked the bladder and caused death.

A young man of 30, who had lived a riotous life, died in great agony from no known cause. Post-mortem showed at least one hundred tumors in the peritoneal cavity, on the bowels, liver and other organs. The disease had invaded the vertebræ and the lungs. This man had money enough to buy good food but used the wrong.

A woman, æt. 35, was deserted by her husband. She sued for divorce and finally won her suit. In the meantime cancer appeared in the womb; the disease was arrested and held back for two years, but finally caused death.

In 1887 (*Albany Medical Annals*, July and August), the senior writer defined cancer to be "Tissue under Mob Law;" "Tissue Rioting." Tissue that the body systemic cannot govern, and hence the reversion to embryonic types and the frightful results sometimes seen in this overthrow of the law of the body systemic.

The blood, *i. e.* in our work, which extends over many years, does not show morphologically any causes; in the end it is impoverished and corpuscles changed, but we must say with all candor that we do not consider that cancer is a blood disease but a tissue disease. This is confounding perhaps our present ideas, but disease has many phases and we must not look on these matters from one side alone.

You may call if you please the cases that recovered not cancer; but the fact remains, that they were very sick people before the treatment and are not now. Let this committee take this idea, that *cancer is tissue under mob law*, and then attack it under all of the chances offered to promote the nutrition, and the members report in another year, the results. We could give you more cases, those under treatment at the present time. One case where the right breast had been removed; the disease returned, it was burnt out with cautery and finally came under our care last August, with a sore 4 inches long, 4 inches wide and 1 inch deep, pouring out the most filthy and stinking discharge. April, 1890, this woman is still alive; the sore is smaller, the discharge less. The treatment has been a rigid diet of chopped broiled beef, the application of tannic acid and quinine ointment to the sore; these applications agreeing better than anything else. Hæmorrhage is now not frequent. Still, her chances of recovery are very small. May, disease increasing.

We leave this part of our subject till treatment is considered.

THIRD SECTION—NEURASTHENIA IN MALES.

Where often the patients objectively appear like consumptives—occurring amongst business men and students, and is due to improper feeding.

We had intended giving statistics of fifty cases, but our report has grown to too large proportions to give these cases.

A preliminary report on this subject was presented to the Richmond Medical and Surgical Society, January 23, 1890, by the senior writer, and published in the *Virginia Medical Monthly* for February, 1890:

Some thirty years ago the writer was secretary of the Middlesex (Mass.) East District Medical Society, and, on being requested by me to do so, one of the members, Dr. ——, kindly stated his case to the Society, and asked for opinions and treatment. It dealt entirely with neurotic symptoms, which varied from time to time, and showed a lack of nerve force without any organic disease, which could be detected. The case was a poser; no expression of opinion nor of treatment could be drawn from the members. The doctor himself was a bright, careful, intelligent observer; and his relation showed that he had skillfully treated himself up to the then present state of knowledge.

After a series of cases had been worked up for several years, on which this paper is based, Dr. ——'s case occurred to mind, and he gratified me by sending, at my request, seven one-ounce bottles of morning urine voided on seven successive days. These specimens, when subjected to physical exploration, *showed the presence of a protoplasmic or colloid discharge*, which, in other cases, had been to me a sufficient evidence of one cause of male neurasthenia, and which it is proposed to explain.

Morphological Evidence.—This physical sign is found in the morphology of the urine. (See "The Clinical Mor-

phologies," E. Cutter, New York, 1888, p. 45.) It is not that observers have not noticed this discharge; they have, still they have regarded it of no pathological significance. Where we differ from them is that *we do regard it* as a valuable diagnostic sign of male neurasthenia. The way this difference of view came about was as follows: Since 1880 we have made a practice of studying the morphology of the urine of patients, *sometimes daily for weeks and months*. But coming upon neurotic cases, in which this colloid discharge was the only appreciable lesion, and finding that when such cases were treated and the catarrhal condition was removed, they always improved, and so long as the patient would follow out directions, the improvement continued, the senior writer was led to take the position here given, and I feel convinced that this complaint is a very common one, occurring often in old and young business men and students who are apparently well, save that their complaints of irritability, pains, sometimes excruciating, making them express themselves in terms which appear, to those most interested about them, whimsical, nonsensical, or, as we used to say in our boyhood, "hypoey." And I might remark here that I now think that, if these cases I knew in my boyhood, and were known to the whole community in which they dwelt as "hypoey," could have had the benefit of what is now understood, they would have passed from the opprobria which rested upon them by proving that there was a physical foundation for their condition, just as the women who had the same term applied to them in those days would have been relieved by finding some gynecological disease.

What to Look For.—In a case of male neurasthenia, which comes to you with a long story of aches, pains, weakness, and sufferings which appear so momentous that you wonder how the sufferer could be alive, and of having want of confidence in the medical profession to discover the seat of his complaint or to relieve him. Usually there is a degree of self-confidence and positiveness of statement in his own conviction, which reminds us of the same qualities we find in our better-halves. You look the case all over carefully; no lesion is found to explain such a great departure from normal innervation. You examine the urine; it appears clear, amber-colored, of good specific gravity, normal in odor, and all that is seen if you allow it to stand over night, is a light protoplasmic cloud, occupying, sometimes, the whole of the lower half of the vial. Or if in graduate glass measure, the cloud will swing halfway between top and bottom of urine. You cannot tell by the naked eye the characters of this discharge. It is put under the microscope, and the deposit is not made up of triple phosphates or urates; but if you use (as you had better use), a one-inch objective—which must be a good one, and the best are none too good—you will find, if the case is a typical one, collections of gluey (colloid), viscid matter, with no extra amount of mucous corpuscles or mucous epithelial cells, moulded in shapes like Indian clubs, varying in color from white to a brown; then, if you look further, skeins of colloid matter, curled up in fanciful shapes, sometimes separated into single filaments, and sometimes filling the field so full of the Hogarth lines of beauty that you cannot help expressing your surprise, perhaps to the discomfort of your anxious patient. Besides this, the discharge is sometimes diffused through the urine in a light, fleecy, unorganized cloud, which is sometimes difficult to recognize, *unless one is familiar with the protoplasmic studies*. Although these three forms are sometimes found together, still they are often found separate, so that, in enumerating them, we speak, *first*, of the protoplasmic; *second*, of skeins; *third*, of Indian clubs. *Next*, you should examine *seven successive specimens of seven days, i. e.*, one of each day, the first urine voided on rising. It has not seemed justifiable, in chronic cases, to base the diagnosis on one examination. For example, spermatozoa may be normally discharged once or twice a month, and if you happen to get a specimen on the day of that normal discharge, it will be unwise to jump into the conclusion that the case is one of spermatorrhœa.

Spermatorrhœa, according to my experience of thirty-six years, is a rare disease, and the diagnosis of it is not complete unless the forms are found very much oftener than the normal discharge.

I may be wrong, but I do not consider the finding of the colloid secretion in one specimen evidence enough; it must be found in a majority of the discharges for the days of the week. When you study urine daily, you will find that it varies very much. For example, in the cases in question I have been very much surprised to find them alternating on some days with albumen, casts of the kidney tubes and fatty epithelia, which I regard as a diagnostic of Bright's disease.

In both neurasthenia and Bright's disease of the kidneys there is more or less paralysis of the parts involved. Some regard the fatty degeneration as a means of staying the effects of the paralysis. In other words, that the destruction of the tissue would proceed more rapidly were it not for the fatty degeneration. Still the neurotic symptoms differ. In simple Bright's disease of the kidneys there is little pain, and when it occurs it comes from rheumatism, and even the neurasthenia which is found sometimes along with the Bright's. The subject is not fully worked up in this aspect and hence I cannot speak so confidently, but it is a very interesting matter for consideration why the loss of albumen should not cause pain, when the colloid and perhaps albuminoid discharges which are found in the complaint under discussion assuredly does. One thing is certain, that neurasthenics thrive in the open air, and are worse in indoor air. A clergyman with this trouble said he would be all right if he worked on a farm outdoors, but he wanted to use his brains in his work. A diet substantially what is lined out below cured him so that he now works indoors and has recovered from impotency. But air is food. There is as much difference between fresh and foul air, as between fresh meat and old.

As to the Importance of this Form of Neurasthenia.—When first acquainted with this disease, I knew it was hard to bear, but did not think it was dangerous; but I have had patients die with it, and the autopsies showed no sufficient cause of death. The manner of going out was with a sudden failure of the heart as if there was not enough nerve force to run it; so I am led to take a more serious prognosis. The patients may live, like Dr. ——, for thirty years, and though he considers that his life has been prolonged by the disease, because it has made him careful where he would have been careless, I believe there is danger, especially as the urine will alternate with albuminuria, fatty epithelia, and renal casts as before noted. This complaint is not due to sexual abuse, *i. e.*, as a sole cause; it is a food disease. The catarrh is mainly from the ducts of the prostate and spermatic glands.

GENERAL RULES OF TREATMENT FOR THESE SECTIONS.

Never Prescribe Raw Beef. Preparation of broiled chopped Beef.—Take beef from middle of the top of round of well fed cattle who were not over-driven just before death. In the handling

of these chronic cases too much care may not be observed in the selection of beef; life often hangs on the smallest detail.

Cut beef into cubes 1 inch by 1 inch by 2 or 3 inches. Free from fat and connective tissue by running it through the Enterprise chopper three times, each time cleansing the fibrous tissue from the plate at distal end of machine. Or use American chopper, which is noisy but is the best. Touch with the hands the muscle pulp as little as possible, as the human animal heat changes the character of the meat. Mould into cakes 1 inch thick and as many inches wide as needed. Broil over bed of live coals, charcoal is the best; oil or gas can be used. The beef when done should be of very dark color outside, and when opened present a reddish but not raw appearance. If the beef is rightly prepared it will be pleasant to the taste. The preparation must be done by a conscientious and humble individual: humble, because most cooks think they know everything about cooking when commonly they know nothing; and the one who has the work of getting ready this beef and cooking it has a position whose influence for good or bad cannot be overestimated.

Serve on hot water plate and season with pepper, salt, lemon juice, Worcestershire sauce, and in some cases butter.

Drinks.—Drink one pint of spring or distilled water that has been raised to the boiling point, one hour before each meal and on retiring. Cool the water to a comfortable temperature and drink slowly. Rest till meal time. Also after meals. The amount of water may be increased or diminished as the urinometer indicates. The urine must be at 1015 to 1020 specific gravity, free from odor, phosphates, bile or deposit. Drink clear tea or coffee at meals.

Baths.—Take ammonia sponge bath, 1 drachm to a pint of water night or morning. Or nitric acid baths, same proportion. Or aromatic sulphuric acid baths, same proportion. Quinine and salicin may be given in bath per skin. The acid baths, and especially with alkaloids, are indicated in sweats.

Exercise.—Passive, by massage so as to confer force. Also passive by riding in carriage. Also by riding on a walking horse. Do not wear people out with too much walking. Sick ones need their nerve forces for something else.

Drugs.—The rule may be laid down, *that the fewer drugs given by the stomach the better.* Yet cases come where there has to be the most careful exhibition of medicines. And at times these same cases will, after taking a great deal of medicine, improve almost immediately on stopping all drugs per stomach. The integrity of the stomach must be kept at all hazards. Treating these cases one learns how to wait.

Tonics.—Salicin; strychnia; pyrophosphate of iron, cinchona; mixtures of the mild vegetable fluid extracts. English iodide of potash in small doses in asthmatic and rheumatic complications and in syphilis. Biniodide of mercury $\frac{1}{16}$ gr., an admirable cholagogue. Exsiccated sulphate of soda for constipation. Boneset, etc. *Each case is a law unto itself.*

In *consumption, tumors and cancer*, the closer patients adhere to a rigid diet of the chopped broiled beef, the better they will do. Sometimes the stomach rebels; this it does when the beef is not right, despite the protestations of the butcher to the contrary. On finally pressing the point, you will disclose that the beef has been kept too long.

Again, the stomach needs firm discipline—there is a hysterical element in some cases (the word hysteria has been poorly used), which must not be catered to and at times roughly handled. Prof. Wm. Goodell tells of how he stopped a patient vomiting by giving her a most cruel scolding. The rule is this, that the closer the lines are drawn, the better will the patient do; no man need expect to succeed treating chronic disease if he has to argue with his patients on the right or wrong of this or that procedure.

When the urine becomes normal, the blood in good order, the physician may bring in gradually some vegetable food, as toasted bread, boiled rice. It has been said we were too rigid, but gentlemen, each case is a law unto itself, and you must feed accordingly.

Bright's disease will respond better when patients are on rigid diet. Yet we have cases of business men who live on steaks and eat some vegetable food.

The same rule applies to neurasthenia. These cases usually occur in those that cannot leave their business. It must be remembered that when the supply of fermenting food is cut off, the patient, previously half drunk and paralyzed by carbonic acid gas and alcohol, slumps so to speak and lays all his trouble to his diet. At these times it is well to give first-class whisky or brandy to some cases. No wines, porter, ale or beer. Use Johnston's beef extract. The whites of eggs slightly poached.

At times patients have to eat entirely against the appetite. Usually it is not well to eat beyond the appetite. In cases where stomachic feeding must be stopped for awhile alimentation has to be done per rectum and skin. It is well for all to remember that even the most depressing of cases, where the prognosis appeared fatal, have recovered. Have all chronic cases go on treatment for a year at least and pay fee in advance each month.

We hope to present within a year to the profession a work entitled "Food and Disease for the Student and Practitioner of Medicine — Upon Tuberculosis, Bright's Disease, Tumor, Cancer, Rheumatism, Diabetes, Obesity, Uterine Disease,

Laryngeal Disease, Neurasthenia, etc., Exemplifying the need of the Use of the Microscope by all Practitioners of Medicine, and Illustrated by over One Hundred Microphotographs of Objects within and without the Body." The work to be sold by subscription only.

New York, The Ariston, Broadway and Fifty-fifth St., May 8, 1890.

DIET IN CONSUMPTION.

Read before the Committee of Dietetics of the American Medical Association, at its Forty-first Annual Meeting, 1890.

BY HERBERT JUDD, M.D.,
OF GALESBURG, ILL.

Until consumption receives less uncertain speculation, and more is written that is trustworthy of simple and satisfactory explanation, every physician has a right to his own opinion. Modern research has done much to turn the attention of the profession to this disease; further than this but little of practical value has been accomplished. With many physicians, old and young, the practice of medicine is, and always will be, but little if anything more than a matter of experiment. No claim is being made that medicine is a science, but that a common ground, a concensus of opinion, will be reached by the non-servile, practical brain-workers of the profession in the matter of reading and treating disease, cannot be doubted, when we acknowledge the rapid, intelligent improvements of the past five and ten years. The writer sprang from a pronounced consumptive type, and for the past twenty-five years has been on a sharp look-out for light upon this subject. To me it is certain that consumption is an acquired disease, and consequently preventive; that if more than 15 per cent. of all deaths in the civilized world can be traced to consumption, there must be a percentage of these fatal cases that can properly be classed as hereditary—what is generally understood as hereditary disease, that as physicians, if we turn our attention practically and intelligently to the living habits of people by whom we are surrounded and among those we daily labor, it becomes a matter of no surprise that consumption causes so high a death-rate. On every farm, in all the States, in all the villages and smaller cities, a permanent dwelling-house, built with any regard to sanitation, is a rare exception. No home can be found built after a plan of perfect sanitation. Thirty years ago, building residences upon sanitary plans was unthought of by the average citizen, and less is known now regarding the sanitary requirements of family dwellings among the teachers of our schools and colleges than is known of astronomy.

Go to our educational centres and look this matter up, and this statement will stand uncontradicted. The question of proper living, sanitation and diet is not entertained nor practically considered by the people of this country, or any country. They know nothing about these vital matters, and seem to care less. It is certainly our professional duty as physicians to plainly look this matter in the face and demand a better education of the people from the school-room and from the pulpit. That consumption is caused or acquired by errors of living long continued, there should be no doubt. This can be demonstrated as a fact, subject to simple proof among all classes of people claiming civilization. Nothing brilliant, startling or unknown, is in any degree attempted in this paper, but consumption, as a disease, properly considered, should plainly teach mankind that we are far short of perfect civilization. When interrogated regarding the question of extermination of the American Indian a late commander of our army, who was well versed in the affairs of men, replied: "The quickest, safest and cheapest manner of extermination would be civilization." If the most perfect individual type of the wild man of the west was bedded and slept and fed the same as the middle or better-to-do class of people in this country, I firmly believe that death would soon follow. That suboxidation or imperfect decarbonization of the blood will immediately begin and would rapidly terminate in tuberculosis. To me this fact was plainly demonstrated during the years 1866–1867 at the Albany Penitentiary. At that time it was customary for the Government to send Federal prisoners to this penitentiary, and the number consisted largely of negroes from the vicinity of Washington and other points in the South. They were brought to the prison and admitted as sound in body, and to the eye were of perfect physique. The death-rate among these negroes was large. Death followed rapidly within one and two years, and was without exception from tuberculosis. The clothing and food were ample. Possibly the change to the Northern climate had something to do with this disease and the death-rate, although the prison was always kept comfortably warm and no degree of exposure was required or occurred in the prison duty.

I have no data regarding the percentage of deaths; I do know, however, that this disease was acute in its character and was confined to this class of prisoners alone, and that the large number of deaths was remarked by the average medical student. Subsequent investigation convinces me that the air supply was much short of what was needed for healthy respiration—of what was naturally demanded by these negroes; and that the tubercular deposit, which occurred invariably in the lungs, was a direct result of suboxidation or decarbonization of the blood. At this time the Albany Penitentiary enjoyed the reputation of being the most perfect in sanitation

and discipline of any prison in the States and from this reason alone federal prisoners were sent there under contract by the Government.

When I was 1 year of age my father built a family dwelling in the village of F., State of N. Y. The house stands to-day, but little changed from the original plan among the best in the village. This house at quarterly meeting time would comfortably accommodate ten Methodist ministers. The family bedroom, in which the father, mother, and three children continually slept until the writer was 5 years of age, was by exact measurement six feet nine inches in length, and seven feet five and three-fourth inches in width, with a ceiling eight feet four inches high. This family bedroom had one window, three feet by five feet nine inches, and one door, six feet nine inches by two feet eight inches. Our food was principally vegetables, and I am now perfectly satisfied were of the fermentative type—vinegar and alcoholic fermentation, as described by Dr. J. H. Saulsbury and Drs. E. and J. A. Cutter, of New York. I am absolutely certain of this. Corn-meal was largely used, cooked into puddings with molasses. It was customary for each family to use largely of molasses. At one time I remember my father bought a hogshead of molasses in New York City, and hauled it himself from the railroad station thirty miles away. Cured codfish, pickled pork and corned beef were supposed to be always at hand in the cellar. Fresh meat was had once or twice a week from the butcher's cart, with no choice. To test the food quality of the corned beef and pork as then used, the writer procured the formula for making the pickle or brine. With the exception of "Turk's Island Salt," the directions were strictly followed. The brine was several times changed and everything done as instructed. The pork as thus pickled, and the beef as thus corned, have been subsequently used as food, and otherwise experimented with, and after a few weeks' time have been found nearly worthless as food, being eaten up by the brine or pickle. This manner of sleeping among families in this village was so common that when the children, innocent boys and girls, happened at the Friday evening exercises of the Institute, or at the Thursday evening prayer meeting, or at the regulation donation party, we were invariable called trundle-bed trash.

This village is the seat of a literary institute that was at this time liberally patronized, as it is now, by students from outside the county and State, and supported then, as now, four thrifty churches. My father was always industrious—a hard worker. He worked beyond his natural strength. He was a pew-holder in two churches, and subscribed liberally to foreign missions. This is a partial but truthful and painful statement of the common manner of living among a number of prosperous families attempting to raise children, and I think that when Dr. Henry I. Bowditch labored in getting statistics relating to the death-rate from consumption in Massachusetts, had he gone inside of all the dwellings and investigated the manner of living at that time as to diet, alimentary and respiratory, he would not have been at a loss to have clearly and truthfully determined the legitimate cause of the enormous fatality from this disease. Possibly he would not have found the trundle-bed in every house, but from what I personally know regarding this matter, I am quite sure he would have found the condition of all the sleeping rooms occupied by growing children—its equivalent. My mother died of intestinal phthisis complicated; my father of fibrous phthisis, and four children—two brothers and two sisters—under 5 years of age, all from acute tuberculosis of the brain or intestines. My father's sister died of consumption, leaving two daughters. One died with diabetes, aged 12 years; the other is now living and in the best of health, and the mother of a vigorous family. My father's mother died with consumption, and my father's mother's father died with consumption; and during the past four years I have had under my observation a family of grown sons and daughters of marked scrofulous diathesis which can trace a line of ancestorship back to my father's mother's father, and in this line of descent are recorded twenty deaths from consumption that can be verified. The several habitations of these people have recently been traced out, and in a number of these old homesteads, during the past ten years, there has been typhoid fever, indicating, possibly, a previous state of imperfect sanitation at the time of a number of these deaths. In one of these families, as reliably traced out, all of the children, four in number, were separated early in life by the death of the mother, the father being an inebriate.

These children each were adopted in separate families. In none of these families can consumption be traced. These four children all died from consumption, aged respectively 12, 14, 16, and 17 years. I am satisfied that these children while growing were ill fed, were over-worked and ill cared for from authentic information, and that in each case there was a hereditary predisposition to consumption. The remaining families that have been identified, five in number, have run through the several generations with a hit and miss death-rate from consumption with the above stated results.

Possibly with this imperfect data at my command, and with my present inability to clearly disprove any knowledge of infection, physicians so inclined will satisfy themselves readily with the theory that the tubercle bacilli has been largely or entirely the cause of these premature deaths. However, I am not of that opinion. I

am satisfied that insanitation, improper diet, living in houses that did not begin to provide fresh air breathing capacity, has done this fatal work; that as the cause there has been this unknown, unrecognized careless indifference handed down this line of generation. Possibly some of the time it has been complicated with the drink habit. We will find ourselves to-day carelessly and without pronounced objection, submitting ourselves and our families to be transported about this country night after night, in the upper and lower berthed sectional sleeping-cars. This same careless, thoughtless principle can again be demonstrated in some of our booming smaller cities of the west which is particularly objectionable in the prairie State, where we can find cemeteries that are built in and surrounded by dwelling houses, and at the same time and without protest the burial of bodies is continued, and in the city the writer lives, it is now being practically considered, without regard to intelligent opposition, to establish permanent waterworks on the well system within a few rods of the cemetery that was founded with the city and is now largely in use. The writer considers water as a food, and that it is as much entitled to consideration as such as alimentary food, and pure respiratory food, and if this article partakes in any degree of a hobby, all I have got to say is mount this hobby with Dr. Solis-Cohen's "nutrition," and if the steed is mounted with one-twentieth part of the zeal that was in the breast of Cortez, this enemy can be routed from every community.

I have never particularly concerned myself regarding the tubercle bacilli as the cause of consumption or tuberculosis, or what is being so much written regarding the infection of this disease. Nothing from this line of investigation has been brought to our notice but what every physician with thoughtful candor would naturally suspect. We are thankful for what has been discovered, and will carefully use to advantage what is found sensible reliable, to prevent consumption. To cure this disease, if we may beg this question, is simply to set ourselves at work in each of our several communities and see that every living person not only has a sufficiency of respiratory food pure and fresh, and also that none are suffering from the stomach or intestinal fermentation—the alcoholic or vinegar fermentation above mentioned. There is certainly much in this, and it is a simple matter to get intelligent people to understand that this is so. It is plainly clear to me that the physician is much, very much, to blame for the lack of understanding with average people regarding matters of diet, mixed diet, the excess of meat, animal food that in many cases must be used for years. Hardly without exception in numberless cases, where the stomach had nearly lost its functions, was weak and rebellious, have I failed to restore it upon meat alone. The stomach is not only a receptacle for food, but it certainly is further than this, a meat digester, and if we will look over our teeth, and will study our jaw adjustment, we certainly must conclude that meat was intended to largely predominate as an article of food for man.

I think that all persons in the first stages of consumption can be relieved, permanently cured, if they will persistently yield to the will of an intelligent physician. These people all have abnormal appetites or none at all. They will insist upon food that is chemically unfit and that cannot naturally be assimilated by them. All persons seeking our advice and assistance that present any suspicion of wasting disease, should be carefully and intelligently examined. The blood and urine should be examined by the microscope, and the urine always in addition chemically analyzed. Every physician can do this work in his own office, and in his own manner, and after his own fashion, after providing himself with the necessary apparatus, the same as we do our reading or any ordinary mechanical work. We are field-workers, the most of us, but we can catch on to enough of the laboratory work of the book-maker to enable us to discriminate whether the blood of the patient be rotten or inclined in that direction, or whether the kidneys are straining such waste from the blood as is required by natural function. I have, in a simple manner, been doing this class of work myself for the past fifteen years, and during the past eight years can number persons by the double score that are now living in comparative good health. They call themselves well. They certainly do not complain. They are now surrounded with what we suppose to be fairly good sanitary conditions. They are living on a changed and improved diet, that was individually determined from experimentation, and they are supplied with large, wholesome living rooms, and at night-time have an abundance of fresh and pure air, mostly from the open window place. All of this, together with congenial business habits, make them happy, contented and industrious citizens.

The people in our towns and smaller cities who are subject to consumption, from personal observation, belong to the better, more industrious classes, and I know the shortsightedness as regards proper living has been an outgrowth of the terrible strain or ambition to get along in the world. This, without exception, has been my observation, during all these years, with those among whom I labor. This class of patients are hard to manage and control. It is almost impossible to do this; and here lies, I think, the greatest difficulty or obstacle toward a recovery. They are self-willed, independent, and are satisfied with nothing short of a servile doctor. They can not be told; it can not be read into them.

You can not force them to understand their condition. They will trifle along and throw aside all chance of recovery, partial or total, until visible signs of decay present themselves. They then possibly return to you; probably not. We all know how this illusion controls the conceit of our patient. The effect upon the nervous system is similar to the drink or morphine habit, or the constant use of any other poison; and from a like physiological condition of the blood I have many times been forced to this conclusion: That if, in the first stages of this disease, we could make every patient intelligently understand their condition, rather than persistently force themselves to a higher and more perfect grade of living were a cure possible, they would prefer to continue along on the premature downward path. The process of decay seems to hold its victims from the first. It soon becomes a second nature.

People generally live on better and more properly prepared food now than they did thirty years ago. It is a question, however, if as a class, the majority give themselves as good or better respiratory food as then. Facts are stubborn things, but it is the rule to find the most uncomfortable part of our dwellings, that part which is most ill-adapted to fresh air and sunlight, made into sleeping rooms. In my own city to-day there are many families among the better-to-do class that are living in the same manner as regards air-food, that I describe in this paper. I have, as far as I could, called their attention to this almost criminal matter, but they seem to be beyond my reach at present. You can tell our air-starved children as you look at them on the streets on their way to school. Follow them home and what you find regarding their sleeping room will verify your opinion. I have done this myself in many cases and have been gratefully listened to, and the suggested change has been promptly and thoroughly made. In other cases I have left the premises with a certain feeling that I had been kicked over the housetop.

During the past five years in many of the smaller towns throughout the West, there has been much improvement in the manner of building ordinary cottages, and I feel at liberty to say that in these communities the death-rate from consumption will decrease. This is my firm belief. Men raising families who begin poor, and by hard work and close living gain wealth, the matter of health among the children is overlooked and neglected. We all know this to be true, and that it is among this thrifty, thoughtless, but well meaning class, that we find our hardest work. It is among such people that we use the strongest part of our professional life, and in after years, as these people find themselves with a competence, they build for themselves more substantial and often elegant residences; but, alas, in too many instances, as we all know, they find themselves alone. The poor, innocent children died by the wayside. Every case of wasting disease of a patient upwards of 20 years of age that has come to me during the past fifteen years, or since the time I knew enough to understand their several complainings, without exception, gave this common history: Long continued stomach and intestinal indigestion; years of living in what were supposed were houses fit for the highest type of civilization, that have since been found not to contain one room used for living purposes that could furnish the required amount, to say nothing about a liberal supply, of pure fresh air, and totally deficient in all additional sanitary requirements.

These are simple every-day matters that have got to be plainly met and thoroughly overcome before any radical change can be made in the death-rate from consumption. All the gain that has been made has been done in this direction. Forced nutrition, long-continued, pure respiratory food must be had in abundance. This line of work has to be done to save life in these cases, and, to be successful, must be entered upon, in most cases, years before the tubercle bacilli is on the premises. This is true as regards this disease called consumption, or tuberculosis. The tubercular cow may cut some figure in cases occurring among the milk-fed children in large cities. No such case has as yet come under my observation.

This paper is wholly based upon my own personal experience as an active worker during the past twenty-five years. I have personally accomplished enough in treating this disease to enable me to endorse the following language, as reported in THE JOURNAL, from Dr. John A. Cutter in the discussion of Dr. J. C. Wilson's paper read at the last meeting of this Association: "The treatment aims to stop the fermentation by the feeding of non-fermentative foods and proper medication, the patient is watched by studying the blood, urine and fæces. So long as there are any masses of vinegar yeast in the blood, so long is the patient in danger of lung narcosis. When the blood has become healthy, then nature has a chance to attack the lung and heal it, and it has been our experience that by incessant, ceaseless watching, by most careful diet and medication, even cases with cavities have been cured and are alive to-day."

That much could be done, and more was to be expected, in the treatment of wasting diseases, particularly consumption, was vigorously taught me by my preceptor, Dr. Albert E. Sullard, of Franklin, N. Y., during 1864–1865. Diet, forced nutrition, with unlimited quantities of fresh air, with proper medication, was persistently followed by him. I certainly owe my life to his intelligence and indomitable will, and from statistics received of him, too late to be embodied in this paper, I find other persons now living can so testify.

LEFT INGUINAL COLOTOMY, WITH REMARKS ON OTHER OPERATIONS.

Read by Title in the Section of Surgery and Anatomy, at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

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The object of this paper is to make some practical observations in one department of abdominal surgery.

As a preliminary to my remarks I have to present the record of a left inguinal colotomy performed at the surgical clinic of the Southern Medical College, at Atlanta, Ga.

It may be stated that the A. C. E. mixture was used as the anæsthetic, premised by a hypodermic of morphia gr. ¼ and atropia gr. $\frac{1}{75}$; and that the large intestine was distended by a copious enema of tepid water previous to the operation.

The expectation in undertaking to make an artificial anus, was that by carrying off the fæcal matter and thus relieving the rectal tumor of all irritation, there would result an atrophy of the structure, favorable to its removal by a subsequent operation. In any event, however, the increasing constriction of the recto-colic induration indicated such an obstruction to the evacuation of the contents of the bowel that it was only practicable when the fæcal matter was kept in a semi-fluid state by the use of laxatives or enemata. The report of the case is as follows:

"A white man, 38 years old, came under the care of Dr. J. McF. Gaston, at the Providence Infirmary, during the month of November, 1889, for a growth in the rectum. After the use internally of Fowler's arsenical solution, with succus alterans for several weeks, and the local application within the rectum of iodoform with balsam of Peru daily without improvement of the induration, colotomy was considered proper to remove the increasing impediment to fæcal evacuations.

"Accordingly, at the regular surgical clinic, on December 4, Dr. Gaston, with the assistance of Dr. W. P. Nicolson, proceeded to make an incision, running in the line from the anterior superior spinous process of the ilium to the spine of the pubic bone, into the peritoneal cavity. The surface of the sigmoid flexure of the colon presented in the wound, and its serous and muscular coats were attached by continuous iron-dyed silk suture to borders of the incision, bringing the serous parietal membrane in contact with that of the intestine, so as to have an oval space of 1½ inch exposed. Iodoform was dusted over the entire surface with iodoform gauze placed in the opening, and the whole covered with antiseptic sublimate gauze, over which a layer of absorbent cotton was secured by a bandage around the body.

"The temperature and pulse showed slight increase during the following days, and the stitches were removed on December 10, the adhesion being complete.

"On the 12th the patient was found with a pulse of 120 and temperature of 104°, having a profuse perspiration following rigors during the night. The wound was granulating, and in all respects was in good condition, but the tongue was much coated, and a discharge from the anus indicated disintegration of the rectal tumor. This aggravation of general condition was therefore attributed to septic contamination from the breaking down of the induration, having no connection whatever with the previous operation. The patient was put upon sulph. quin. grs. v, bic. soda grs. vj, calomel gr. j, in capsules every two hours until five doses were taken, which induced fæcal evacuation.

"In the meantime the rectum was washed out with a solution of boracic acid, and the mixture of balsam of Peru left in the rectum. All local applications had been suspended after the operation, as there was no prospect of accomplishing any change in the tumor, but the above course was pursued daily from this time.

"On the afternoon of the same day the temperature had fallen to 100° and the pulse to 110 beats, and on the day following they became normal.

"A combination of Huxam's tinct. of cinchona and serpentaria, tinct. nux vomica and chlorate of potash was given every two or three hours, and on the 14th, his condition being favorable, preparations were made for completing the colotomy.

"With the assistance of Drs. Divine, Elkin, Nicolson and Murray, Dr. Gaston completed the operation in the following manner:

"Hypodermic of morphia and atropia was given; cocaine, 4 per cent. solution, was applied to granulating wound; a tenaculum was secured in the coats of the intestine near each angle of the incision to lift it up and put it on the stretch, a small puncture being made with a knife at one end of the proposed line of opening, a probe-pointed bistoury was pressed through this for the division of the walls of the colon to the extent of 1¼ inch. Retractors were used on each side to draw the cut edges back, and a plug, made by tying oil silk around cotton, so as to bulge in the form of a ball, was pressed into the bowel and retained by a compress of gauze laid over the expanded corners of the oil silk. A fold of cotton was firmly secured over all by a broad roller bandage around the body. There was but little sensation of pain by the patient, and his general condition was good subsequently, under the continued use of ½ gr. of gum opium at night. He has had the dressings renewed daily with copious fæcal evacuations from the opening, and but little discharge from the anus. The boracic solution and iodoform, with Peruvian balsam, continue to be applied twice a day in the rectum

for the correction of the disintegrating process in the tumor.

"On the 9th of January, 1890, Huxam's tincture mixture was discontinued, and a combination of mur. tinct. iron and tinct. nux vomica ordered four times a day to counteract a tendency to night sweats. In all other respects the case is progressing satisfactorily, except that a swelling has occurred to the left of the anus, connected with the carcinomatous degeneration."

The further observation of the patient while in the infirmary demonstrated the entire success of the operation in establishing a direct outlet from the colon. By securing a plug over the opening with an elastic strap the evacuations were controlled so as to have the motions of the bowels at fixed periods. There was very little, if any fæcal matter discharged by the anus, though the disintegration of the carcinomatous tumor led to some escape from the rectum daily. The mixture of iodoform with balsam of Peru was thrown into the rectum after washing out with a solution of boracic acid, for a time; but finding that the boracic solution passed up and out at the artificial anus, so as to run the risk of contamination by dislodging the débris, this was ultimately abandoned. The swelling referred to in the clinical report lessened under poulticing, with the occurrence of suppuration, which escaped through the anus. An increase of appetite, with sleep at night, and a hopefulness on the part of the patient led to his discharge from the infirmary. His brother has reported his condition from time to time, stating that the gluteal abscess broke externally and gave exit to some fæcal matter with a purulent discharge from the opening near the anus.

The last communication, dated May 15, 1890, states that the patient cannot last but a few days longer, and it is probable that ere this death has occurred.

At different times I have reported two other cases of carcinomatous tumors of the rectum which terminated fatally without resorting to any operative measure; and the question which is presented for solution in similar cases bears upon the propriety of early extirpation with or without an artificial anus. I am convinced that left inguinal colotomy by the process adopted in this instance of effecting a primary union of the peritoneal coat of the bowel and the lining of the abdominal wall, is the most effective mode of producing an artificial anus. It is very simple and easily done, without any possibility of the escape of the contents of the colon into the peritoneal cavity, which is liable to occur in the opening and attachment of the margins of the gut and the parietes at a single operation. This primary union of the parietal and intestinal surfaces by adhesive inflammation is also well suited to the relief of stenosis of the descending colon, and may be resorted to in the transverse colon by attachment to the parietes in the epigastrium with facility.

In consultation with a colleague two years ago, I saw a case in which constriction of the descending colon could barely admit an intestinal tube, and only when the fæcal matter was in a semi-fluid state could evacuation be effected. But from time to time relief was thus afforded, and for several weeks it was hoped that dilatation might be accomplished. The case, however, terminated fatally, and upon the post-mortem examination it was verified that the indurated band was circumscribed in such form that an outlet above the constriction would have been entirely practicable by the attachment of the intestinal and parietal walls. Had an artificial anus been effected, it is a fair inference that complete occlusion would have ensued at the constriction, and the consequent atrophy of the tissues would have proved favorable to the excision of the diseased structure.

We may rely upon the diminution of the activity of the vascular supply in tissues which are left at rest, and when the function of the intestinal canal is entirely suspended by the discharge of the contents at a certain part of the tract above a stenosis, all below must undergo a gradual loss of vitality which renders operative measures less liable to troublesome consequences.

The principle involved in cutting off the passage of the contents of the intestines from certain portions is demonstrated not only by establishing an outlet externally, but also by connecting one portion of the intestine with another in such a way as to bring the segment above a constriction into communication with that below it. Thus a stenosis or contraction of the lumen from any cause, is excluded from the intestinal tract, and the new channel serves to bring the upper and lower portion of the canal into direct relations.

While I lay no special claim to priority in the presentation of the merits of intestinal anastomosis to the profession, yet it is not out of place to reiterate the statement made in my paper on the "Surgical Relations of the Ileo-cæcal Region," at the meeting of the American Medical Association in 1886. It is upon record in THE JOURNAL that the following paragraphs appeared as parts of my paper:

"Stenosis from fibrous depositions or malignant growth in the vicinity of the ileo-cæcal connection would seem to warrant the removal of the entire structure involved.

"The practicability of relief in this class of cases by effecting a direct communication between the ileum and colon so as to cut off the passage through the ileo-cæcal valve, is worthy of consideration.

"The diseased structures become atrophied or may be excised subsequently. If it should be desirable to effect an immediate passage from the ileum into the colon, with a view to accomplish

the resection of the diseased structures on the same occasion, there could be no difficulty in proceeding upon the same principle as indicated by my punch process for the communication of the gall bladder and the duodenum.

"We may imitate nature in her effort to obviate the difficulty of constriction in the natural course of adhesions and a fistulous communication directly, by adopting the measure for uniting the coats of the intestinal canal above and below the point of stricture, and thus establishing a direct route for the passage of the contents of the alimentary canal by cutting off the obstructed coil of intestine. So soon as the direct artificial communication between the ileum and colon is fully established through the opening made by separation of the tissues included in a circular or oval row of stitches, the cessation of the passage through the ileo-cæcal valve must lead to a gradual atrophy of the structures adjoining on either side, and in case of simple stenosis, obliteration of the canal will ensue, while if carcinoma exists, there will be such a diminution of vitality in the healthy attachments as to lessen materially their susceptibility to shock or inflammatory action, so as to admit of the requisite operation for removal by resection and suturing for closure of the divided ends.

"In case of simple stenosis or malignant growths involving the ileo-cæcal connections, ileo-colostomy is indicated."

The process of effecting the anastomosis of one part of the intestinal canal with another is illustrated by cuts so that it cannot fail to be understood, and reprints of the paper can be furnished to all who desire information on the subject.

In regard to the mode of effecting the intestinal union considerable diversity exists. While the operations of Masonneuve, Langier, Hacker and Senn differ materially from mine, it does not matter much by what process the apposition is maintained, so that an opening is established, whereby the passage of fæces may occur from the portion of the intestine above the disease to another below it.

The grand result aimed at is the continuity of the intestinal canal in cases of obstruction from organic stricture; and the attachment of a portion of the small intestine above such a constriction, to a portion of the same or to the large intestine below, with a provision for free transit of the contents, must obviate the necessity of an external outlet by an artificial anus. Notwithstanding the high estimate placed upon Greig Smith as an authority, it must appear to every considerate observer, that he advises a resort to artificial anus in cases of obstruction which might be effectually relieved by the process of intestinal anastomosis which I have urged.

The record of another operation may be appropriately introduced in illustration of an important phase of abdominal surgery. This was gastrostomy for occlusion of the œsophagus just above the diaphragm.

As there is no history of the case given in the clinical report, it may be stated that an injury was inflicted in the early youth of the patient, from swallowing a briar along with a berry, which stuck in his throat. From time to time he experienced some difficulty in swallowing, and occasionally the impediment was such as to limit him to fluid diet, such as milk with raw eggs. On several occasions he had experienced so much inconvenience as to require medical advice; and being called in consultation about a month prior to the operation, an attempt was made with bougie and a stomach tube to pass the constriction. The patient had so little capacity or toleration for any examination of the gullet that nothing was accomplished in the way of dilatation, and I then recommended him to submit to a radical operation. He had been able to swallow beef soup and other fluid nourishment up to this time and was fairly nourished, so that he declined my proposition. The following details are given in the report:

"The patient was a white man 35 years old, under the care of Dr. A. C. Moreland, who requested Dr. Gaston to undertake the operation of gastrostomy, after attempting rectal alimentation for two weeks; and the case was accordingly turned over to him on July 8 for preparatory treatment. This consisted in the addition of ½ oz. of tincture of Peruvian bark to the nutritive enemata every four hours, until July 13, when the operation was performed in the following manner:

"An incision, 4 inches long, extending from the median line obliquely across, 1 inch below the cartilages of the ribs on the left side, was carried through all the structures into the peritoneal cavity. Four fingers of the left hand were introduced, and after considerable difficulty, owing to the contracted state of the coats of the stomach, the organ was brought into the external opening. Two strong silk ligatures were passed at a distance of 1½ inch through the walls of the anterior portion of the large curvature of the stomach, and secured by an assistant, while an incision of 1 inch was made in the intervening tissue, entering the cavity. The forefinger of the operator's left hand was then passed up to the cardiac orifice, and with this as a guide, an olive pointed elastic probang was introduced and carried up through the constricted part, about 2 inches above the cardiac opening, requiring only moderate force in the passage of a bougie ½ inch in diameter. The edges of the parietal peritoneum were closed with continuous catgut suture to the point where the incised walls of the stomach were drawn into the external wound, and then secured around this by stitches, including only the serous and muscular layers, at a distance of ½ inch from the edges of the stomach. A deep interrupted silk suture was

used to close the parietal wound up to the included margins of the gastric walls; and these were attached to the edges of the parietal incision, by first passing interrupted stitches of silk and catgut alternately through both, which were left for the time without being united. A silver canula of ½ inch diameter, ¾ of an inch long, having flanges at both ends, was now introduced into the opening, and the stitches tightened and tied around the entire margin of the gastric aperture so as to fix the canula in its position. An India rubber stopper closed the tube, so as to be removed at will, for the introduction of nourishment. The tegumentary union was covered with iodoform, with antiseptic cotton, and a sheet of protective oil cloth outside, the whole being secured by turns of a broad roller bandage around the body.

"After recovering from the effects of the anæsthetic (A. C. E. mixture) the patient took a sip of water, declaring that it went into the stomach, and afterwards used milk and lime water, or milk punch repeatedly in small quantities. But this was followed on the second and third days by regurgitation. On the evening of the 16th milk was thrown into the stomach through the canula, but returned immediately by the contraction of the stomach.

"From the outset, after the operation, enemata of beef soup, corn meal gruel and tincture of Peruvian bark were kept up every four hours, with a view to relieve the stomach; and after this unfavorable experiment with feeding by the mouth or the canula, the necessity of continuing this mode of alimentation was very apparent.

"The temperature and pulse beat had not gone much beyond the normal prior to the morning of the 17th, when all had changed for the worse, with an accelerated pulse and temperature of 103¼° F. It had been necessary to draw off the urine with the catheter frequently, while at times it was passed voluntarily, and the quantity on this occasion exceeded ½ pint, showing that the secretion or excretion was progressing regularly.

"There was no distension of the abdomen indicating local peritonitis, and the patient swallowed peptonized milk with lime water without greater difficulty than on previous occasions. But the mind was somewhat impaired, and the vital powers evidently giving way, so that it gave no surprise to learn that he died at 2 P.M. of that day, being the fourth after the gastrostomy was done.

"An autopsy, four hours after death, showed the external wound united, with the exception of a single point in the peritoneum, near the border of the gastric attachment, while the union between the gastric and parietal walls was complete. The stricture in the œsophagus embraced all its coats for an extent of 2 inches, and was much thickened and indurated, with a tendency to disintegration of structure immediately below this hard mass.

"The indications of scirrhus degeneration are such that there was no prospect of final relief, even should the patient have survived the measure of temporary alimentation. The specimen will be submitted to examination by the microscope, for decision as to the character of the disease."

The cause of death in this case was clearly inanition. He persisted in refusing to submit to the operation, in the hope that the occlusion might yield, until his vital force was too much exhausted for recuperation. A lesson is conveyed by these fatal results of delay in such cases, and the surgeon should urge patients suffering with difficulty of deglutition to avail themselves of gastrostomy while still able to take nourishment, as they are in a much more favorable condition for recovery. I have had two children brought to me for examination in the past two years who suffered from swallowing caustic fluid, which in the cicatrization left stricture of the œsophagus below the middle. They were fairly well nourished by fluids, and an operation for attaching the stomach to the parietes of the epigastrium would doubtless have proved successful at that time. But the parents declined this, and also refused to subject the little patients to the inconvenience of dilatation by bougies. The result was of course the death of both in a comparatively short time. One of the practical observations which presses itself upon our attention in these cases is the inefficiency of rectal alimentation for sustaining the powers of the organism for any considerable period, leading finally to inanition.

THE VALUE OF ATROPIA IN ENURESIS.

Read in the Section of Diseases of Children at the Forty first Annual Meeting of the American Medical Association, held in Nashville, Tenn., May, 1890.

BY R. B. JAMES, M.D.,
OF NEW YORK CITY.

In December, 1888, Dr. Simon Baruch read before the New York Academy of Medicine a paper (*Archives of Pædiatrics*, April, 1889), in which he discussed "Nocturnal Enuresis in Children, and its Treatment," bringing to the notice of the medical profession the great value of the alkaloid atropin in this affection, as evidenced by results obtained in quite a number of cases in which he had used it. But he added that since his cases had not been very long under observation, he could not predict the ultimate result to be obtained.

Dr. Perry Watson, of Jersey City, read before the American Medical Association, at its last meeting, a paper in which he reported in detail thirty unselected cases of enuresis all cured or greatly benefited by this drug. Prompted or encouraged by such glowing accounts of the virtue of this drug, many of the profession resorted to

its use with great confidence and expectations; but a long and faithful trial of it has scored another failure in our search for specifics; for some of us, at least, have found that the number of cases of enuresis cured by atropia, during its administration, is truly great, but the number remaining cured when the drug is stopped is small indeed.

The writer, while resident physician in an orphan asylum in New York, had under his charge many cases of enuresis that had resisted belladonna, strychnine, and the other lauded remedies. After hearing Dr. Baruch's papers he determined to give atropia a trial. Fifteen of the worst cases among the smaller children, from 3½ to 9 years old, in which no cause for the trouble could be made out, were selected. Some of them wet themselves alternate nights only, others every night, while a few suffered from diurnal as well as nocturnal enuresis. In this institution all the smaller children are put to bed at 6 P. M. and made to rise three hours later, at 9 P. M., and urged to urinate.

The following plan of treatment was instituted: I made a solution of atropia sulphate, of which one teaspoonful represented $\frac{1}{100}$ gr. of the drug. Of this solution, for the first night, each child had one teaspoonful at 6 and another at 9 P. M., and this to be increased by one teaspoonful every night till a controlling dose was reached for each case. None of them were benefited by less than $\frac{1}{100}$ gr. at night, *i. e.*, $\frac{1}{100}$ gr. at 6, and $\frac{1}{100}$ gr. at 9 P. M., while others require as much as $\frac{1}{100}$ gr. (divided as above). One case was given as much as $\frac{1}{10}$ gr. at night without showing symptoms of poisoning.

It may be stated that nothing short of the quantity that produced full physiological effects was of any avail. This point was insisted upon by Dr. Baruch in the paper referred to. After the controlling dose was ascertained for each case it was repeated every night for about one month, when the drug was withheld altogether. It was found that many of the cases were completely relieved, while others were not benefited. The latter were immediately put on their controlling dose and an attempt made to diminish it, "to taper off," so to speak, but without much success in this, though in no case was it found necessary to increase the original controlling dose, except in one case (12), where it lost its effect.

Now, of the cases "completely relieved" the enuresis returned in all, with one exception, in periods ranging from one to six weeks. The case (8) that was cured was a healthy boy but slightly affected. These cases were put on their controlling doses as they relapsed, and an attempt was made to "taper off" with them also, and in some cases a considerable reduction of dose was effected. These cases were kept under close observation for eight months, during which time many of them would go without the drug or on reduced doses from one to four weeks without wetting themselves; but sooner or later the relapse would occur, and at the end of the eight months they were but little better than when we started treatment.

It can be seen how any one who has not kept a long watch over his patients could readily arrive at the conclusion that permanent relief had been obtained in most of these cases, especially if he depended on the matron or person in charge of his cases for his information; for after such complete relief afforded by the treatment she is slow to acknowledge a relapse, and it is only after the closest scrutiny and questioning that you can arrive at the actual state of affairs. Such, at least, has been my experience, for not a few of these cases reported here were marked cured in my notes, after questioning the matron carefully, but on visiting the wards myself early in the morning I found that such was not the case. No doubt this element in human nature is largely responsible for the erroneous conclusions arrived at and published by those who rely too implicitly on the information gained from attendants.

Below is a short report of the fifteen cases, as to age, sex, controlling dose, effect and result of treatment. The doses mentioned were always given half at 6 and half at 9 P. M. Case 1 may be taken as the typical case; those doing worse or better are the exceptions.

Case 1.—Mary G., 9 years, March 2, 1889. Controlling dose, $\frac{1}{100}$ gr. ($\frac{1}{200}$ gr. at 6 and $\frac{1}{200}$ gr. at 9 P.M.). May 18, has not wet bed for one month, stopped atropia. July 1 relapsed; atropia resumed. Nothing less than $\frac{1}{100}$ gr. will control her for any length of time. October, 1889, enuresis returned when drug was stopped.

Case 2.—Oscar L., 6 years and 6 months. March 2, Controlling dose, $\frac{1}{100}$ gr. ($\frac{1}{200}$ gr. at 6 and $\frac{1}{200}$ gr. at 9 P. M.). Results similar to case 1, save as to date. October, 1889, enuresis returned when drug stopped.

Case 3.—Eva R., 5 years and 6 months. Controlling dose, $\frac{1}{100}$ gr. April 22, has not wet bed for one month. Gradually diminished dose without return of enuresis. October, 1889, does not wet bed every night; a great improvement.

Case 4.—Hannah C., age 8 years. March 2, Controlling dose, $\frac{1}{100}$ gr., which produced symptoms of poisoning. Did not lessen dose. Results similar to case 1, except she had longer relief when drug was stopped. October, 1889, enuresis returned when drug was stopped.

Case 5.—Felix H., 6 years. Controlling dose, $\frac{1}{100}$ gr. May 1, relief complete, stopped drug. July 1, wets bed occasionally. Drug resumed October, 1889; cured completely.

Case 6.—Pauline P., age 6½ years. March 2, Controlling dose, $\frac{1}{100}$ gr. April 22, has not wet bed for one month. Atropia stopped; immediate

relapse. Atropia resumed; attempt to reduce dose; no success. October, 1889, not cured.

Case 7.—Henry W., age 7 years. March 2, Controlling dose, $\frac{1}{100}$ gr. May 1, relief. Gradually diminished dose. July 1, relapsed; drug resumed. October, 1889, not cured.

Case 8.—Isadore S., age 7 years and 6 months. March 2, Controlling dose $\frac{1}{100}$ gr. April 22, relief; stopped drug. October, 1889, completely cured.

Case 9.—Maurice S., 6½ years. Controlling dose, $\frac{1}{100}$ gr. Result similar to case 1. October, 1889, not cured.

Case 10.—Abe S., 5½ years. Controlling dose $\frac{1}{100}$ gr. Result similar to case 1. October, 1889, not cured.

Case 11.—Sarah R., 7 years. Controlling dose, $\frac{1}{100}$ gr. Result similar to case 1. October, 1889, not cured.

Case 12.—Peter S., 7 years. March 2. Controlling dose, $\frac{1}{100}$ gr. May 18, relief; atropia stopped. June 20, enuresis returned; put on $\frac{1}{100}$ gr.; does not control; increased to $\frac{1}{100}$ gr. without effect, so drug was stopped.

Case 13.—Lily F., 3½ years. March 2. Controlling dose, $\frac{1}{100}$ gr. May 1, relief; stopped drug; partial relapse. October, 1889, much benefited.

Case 14.—Hattie R., 6 years. March 2. Controlling dose $\frac{1}{100}$ gr. April 22, relief, but relapsed when drug was stopped. Attempt to reduce dose, with little success. October, 1889, not benefited.

Case 15.—Rachael E., 7 years. March 2. Controlling dose, $\frac{1}{100}$ gr. April 22, relief; drug stopped; relapsed; drug resumed. October, 1889, not cured.

In only one case did any symptoms of poisoning occur, and in this not sufficient to warrant a suspension of the remedy, or even a diminution of the dose. Under the long continued use of the drug, though in such large doses, there were observed no bad effects from it; but, on the contrary, the children, being relieved from the stigma of being a "bed wetter," were brighter and less constrained than when the drug was left off, with the consequent return of the enuresis. It may be well here to state that some of these children, though under the age of 5 years, were so ashamed of their affliction that on finding they had wet their beds at night, would exchange their wet sheets for dry ones from the cots of their slumbering neighbors, thus shifting the coming lecture to innocent shoulders; so great was the effect of the so-called "moral treatment."

As may be seen, every case was absolutely controlled so long as the treatment was kept up, except in one case, where it lost its effects after some months of complete relief, and this for some unknown cause which was never overcome, though the drug was pushed to a dangerous point.

It is a matter of no little regret that after such a promising beginning, the final result shows such a little gained.

On October 1, after eight months of treatment of the fifteen cases, two cases were cured, and these mild cases; two others benefited, in that they did not wet their bed so often; one it ceased to benefit, while ten showed little or no improvement when the drug was stopped.

I stated that in some of these cases the dose could be diminished after the controlling dose had been continued for some time. Now, any long use of this diminished dose would lead to a relapse, and it is more than probable that the length of time before this relapse occurred was but little if any greater than it would have been had the drug been withheld entirely; and I am compelled to acknowledge that anything short of the full controlling dose is of little value, though since the effect of the full dose lasts so long after the drug is stopped, one would suppose that smaller doses would serve to keep up this effect. Such was the principle upon which I worked, but without any great success.

In these cases there could be made out no cause for the trouble. They were all in good health otherwise; their food and hygienic surroundings were all that could be desired. They were allowed no fluid at night, but under the atropia treatment this point was not insisted upon, as it seemed to make no difference whether they had a moderate amount of fluid at supper or not. In short, these cases represented what we often find in private practice. Children in seemingly perfect health and under good moral training yet persist in wetting themselves and their beds without any assignable cause.

Now, since the long continued use of atropia has no ill effect nor tolerance established that requires an increased dose, and since undoubtedly the vast majority of these cases can be controlled by the drug, we can claim for these children and their mothers a valuable friend in atropia. When a child is too large to wear diapers, or they cease to be effectual, we can with confidence offer a substitute in the shape of a full dose of atropia, to be repeated every night until the child has outgrown his infirmity, and this point can be tested by having the drug withheld from time to time.

It will be well to add, in conclusion, that many other cases of enuresis were put on atropia, and it controlled them in every case under 12 years of age; and at this writing, April, 1890, thirteen months after the treatment was begun, these children are about as they were last October, receiving their nightly doses of atropia, and improved only as we have a right to expect with the advance in years. As to those over 12 years old who received this treatment, which was quite a number, can only say they did badly—cannot

recall a case that was benefited in the least; and I fear that children over this age suffering from enuresis are subjects of such inherent defects that other drugs or means than atropia must be sought ere they are relieved.

160 East 92d street, New York City.

FACTS VERSUS FIGURES. YELLOW FEVER INOCULATION.

Read in the Section of State Medicine at the Forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May 21, 1890.

BY GEO. M. STERNBERG,
MAJOR AND SURGEON, U. S. A.

My report on Dr. Freire's yellow fever inoculations having been recently published in the annual volume of the Marine-Hospital Service, I should not consider it necessary to say anything more about Dr. Freire's inoculations but for the fact that a majority of the readers of THE JOURNAL are not likely to see this report, and I dare say many will be influenced by the statistics of Dr. Freire and the enthusiastic support Dr. Gaston[1] and his son-in-law Dr. Lane,[2] of San Paulo, Brazil, to accept figures as evidence of the prophylactic value of Dr. Freire's inoculations.

It is hardly necessary to say that figures are not facts, although when used for statistical purposes they are supposed to represent facts. We accept Dr. Freire's figures as representing the fact that a very large number of persons in Brazil have been inoculated by himself and some of his medical friends with his cultures, but having very positive evidence that these cultures do not contain the specific germ of yellow fever, we consider the statement that his inoculations are made with the "attenuated microbe" of yellow fever to be a fancy and not a fact.

And in judging of the value of his recently published statistics we take the liberty of looking back of the figures at certain facts which were developed by our personal investigation in the city of Rio; but before referring to these we desire to call attention to a fact stated by Dr. Freire himself, which for us is of prime importance. In Dr. Gaston's translation we read: "There were inoculated in Rio de Janeiro 1,183 persons under the conditions mentioned, and of these the deaths should have been at least 591. Behold! Only 18 died.

On page 16 of his latest publication[3] Dr. Freire gives the names of twenty-one persons among the vaccinated during the year who died of yellow fever, viz.: "Eleven strangers and ten Brazilians."

Let us, however, take the figures as given in the paper from which Dr. Gaston has translated. The proportion of deaths is $\frac{1,183}{18} = 65.72$. That is one person out of 66 of the vaccinated died of yellow fever.

Now let us see what was the ratio of mortality among the unvaccinated portion of the population. According to Dr. Freire the total number of deaths during the epidemic was 2,386, including those which occurred in the Jurajuba Hospital (800). The total population of Rio is estimated at 400,000; let us divide this by two on the supposition that one-half of the population is protected by a previous attack or by long residence in the city. This gives us $\frac{200,000}{2386} = 83.82$. That is, the mortality among the vaccinated was greater than among the non-vaccinated, estimating the susceptible population at one-half of the entire population of the city. And yet Dr. Freire estimates that 573 lives were spared in the city of Rio by his inoculations. This result is reached as follows:

"With a view to illustrate the efficacy of the inoculations let us record the ratio adopted by Dr. Jemble, in Senegal. He verified that among the strangers residing there from one to three years, 75 out of 100 are attacked with yellow fever and 66.6 out of 100 died. Let us make application of these proportions to our vaccinated strangers and natives, that resided in the infected district from a few days to three years."

It is by this estimate that a saving of 573 lives is made out. I am surprised that Dr. Freire has the temerity to again resort to this misuse of the statistical method, after the criticism which his his statistics for the year 1884 underwent in the Imperial Academy of Medicine of Brazil. I give below a translation of an address made by a prominent physician of Rio de Janeiro, Dr. Nuno de Andrade, inspector-general of hygiene of the ports of Brazil. This was made at a meeting held on July 14, 1885, and is translated from the bulletin of the Academy. . . . .

But passing over all these incidents, the speaker proceeded to explain to the Academy Dr. Freire's singular method of arranging statistics to prove the efficacy of his preventive inoculations. . . . . The process of manufacturing statistics discovered by Dr. Freire exceeded anything the speaker had ever deemed possible, for his statistics for Rio Janeiro in 1884 were prepared with data obtained in Senegal in 1881. What Dr. Freire proposed to ascertain was whether in 1884 the number of deaths in Rio de Janeiro, in proportion to that of the persons liable to take the yellow fever was greater or not than that of the deaths among vaccinated persons in proportion to the whole number vaccinated. With this object in view, he said: "In Senegal, in 1881, of four foreigners with less than three years' residence in this country, three had the yellow fever, and of these two died; therefore the proportion of cases of yellow fever was 75 per cent, and the mortality among the patients was 66.6 per cent. In Rio the mortality in 1884 was 35 per cent;" *ergo*, reasbned Dr. Freire, 35 (of Rio) : 66.6 (of Senegal) : : x (of Rio) : 75 (of Senegal). In this cal-

[1] The Journal, March 22, 1890. Facts *versus* Fiction Touching Yellow Fever Inoculation.
[2] Letter from Brazil by "Occasional Correspondent." The Journal, July 27, 1889.
[3] Statisque des vaccinations au moyen des cultures du microbe atténué de la fièvre jaune, Rio de Janeiro, 1890.

culation, whose wonderful ingenuity had greatly impressed the speaker, x = 39.4. "Thus" concluded Dr. Freire "in Rio de Janeiro in 1884, of every 100 persons liable to have the yellow fever, 39.4 were actually taken with it; and as the mortality was 35 per cent, represented by 654 deaths, the whole number of patients was 1873." Wishing to learn next how many persons there were in Rio, in 1884, liable to have the yellow fever, Dr. Freire established the following proportion: 39.4 : 100 :: 1873 : x. Therefore 39.4 x = 187,300, and x = 4,737. Hence Dr. Freire concludes that in 1884 there were in Rio de Janeiro only 4,737 persons liable to have the yellow fever, and that of these 654, or 13.7 per cent died, while of the 418 vaccinated there died only 7, or 1.6 per cent.

From this he infers that the result of his preventive vaccinations is really wonderful. (Page 181 of "Appendix to the Doctrine Microbienne.")

The speaker, however, preferred omitting the statistics of Senegal and making use only of those of Rio. Deducting, then, from Dr. Freire's list of vaccinated persons those who had more than three year's residence, and those residing in Vassouras and Serraria, the number of those liable to have the fever, according to the theory advanced in Dr. Freire's calculation, is reduced to three hundred and forty. Among these there were ten deaths, *i. e.* a mortality of 2.9 per cent.

The number of foreigners who arrived in Rio de Janeiro in 1880, 1881, and 1882 was 66,628, all liable, according to the aforesaid theory, to have the fever.

This number, which is taken as a basis for the calculation, said the speaker, is not exaggerated, for if it be true that many of these persons did not remain in the city, it is also true that the calculation does not include the tens of thousands of sailors on board the vessels in port, nor the persons newly arrived from the country, nor the children residing here, who are unfortunately paying a heavy tribute to the epidemic.

Very well, the 654 deaths from yellow fever among the 66,210 persons liable to take the disease (66.628—418 vaccinated by Dr. Freire) represent a mortality of 1.01 per cent, which is much smaller than the mortality among the vaccinated.

At this point the speaker said that owing to his fatigue and the lateness of the hour he would, for the time, terminate his address.

But what shall we say of the very favorable statistics from Campinas, the former residence of Dr. Gaston? Simply, I think, that the favorable results are due to the fact that *the survivors of the epidemic were inoculated.* To make a fair test the inoculations should have been made in advance of the epidemic, or at the very outset.

In that case a comparison of results among persons of equal susceptibility, and exposed in the same way would have been of scientific value. But the survivors of an epidemic have already demonstrated their slight susceptibility to the disease, and not having contracted it during the height of the epidemic what reason have we for ascribing their immunity during its decline, or after its termination, to the inoculation practiced by Dr. Freire or by his disciple Dr. Angelo Simoes, of Campinas. Some of those vaccinated did contract the disease as we learn from Dr. Simoes letter of May 7. He says: "I think then that the portion of the population not attacked by the disease have been vaccinated; and the new cases, *which are few*, that are appearing in individuals who do not wish to avail themselves of this prophylactic, *without counting one or another vaccinated, who has had the disease mildly.*" (Italics by present writer).

We learn from Dr. Freire's report of a later date than this letter from Dr. Simoes, that three of those vaccinated at Campinas died.

Since Dr. Gaston has quoted from Brazilian physicians who have faith in Dr. Freire's inoculations, I may be permitted to quote from some prominent physicians of the capital who have pointed out the insufficiency of the evidence.

The following is from a letter by the president of the Central Board of Health, of the Empire, which was published in one of the daily newspapers of Rio, in April, 1886:

I am obliged to correct the statements of Dr. Domingos José Freire in his article of the 7th instant, and in so doing I shall simply narrate facts, as I consider it unnecessary to enter into a formal discussion of the question.

For the facts referred to see my report, p. 184. The letter concludes as follows:

It is my sincere desire that Dr. Freire may continue to study the preservative action of his microbian cultures in relation to the yellow fever, but that he may do so calmly and without bias, like a scientific man, as did Edward Jenner in regard to vaccine matter as a preservative from small pox.

Let him avail himself of the labors of his professional brethren, and let him select assistants qualified to elevate his theories in the opinion of the public and profession instead of recruiting them among speculators and frequenters of tenement houses, who obtain greater numerical results by making victims and not disciples.

Let him again attend the meetings of the Academy of Medicine, where he has always been listened to with interest, and let him there recount his triumphs without showing offense if some colleague happens to differ from him. He should remember that science has always had its martyrs, but that these in compensation have been glorified by history.

Let him not be deceived by the praise bestowed on him in the press by persons who for purposes of their own make use of his name.

There have already been recorded many cases of deaths among persons inoculated with the microbian liquid, including the members of a respectable family vaccinated a year ago in Catumby. One member of this family died of a pernicious lymphatitis a few days after vaccination, and another of yellow fever a little over two months ago. Every one else in the house had the yellow fever, although vaccinated. The person who fared best, having only a mild attack, was one who was absent when Dr. Freire invaded the house and performed the vaccinations without the previous consent of the head of the family.

The mortality among those vaccinated by Dr. Freire in 1884 was even greater in proportion to the number vaccinated than during the past year. He, himself, admitted seven deaths, and also confesses that "during the epidemic season a great number of the vaccinated were attacked with the malady."

But the list of deaths has been added to considerably by some of his medical confrères in Rio de Janeiro. The following is from Dr. Araujo Goes, a member of the Central Board of Health, and a gentleman whose statements are worthy of the fullest confidence:

My letter to the Imperial Academy of Medicine having been published it now behooves me to publish the statistics relating to the vaccinations on Morro da Viuva.

One fact seems to me to be definitely demonstrated, that is the worthlessness of Dr. Freire's vaccination, as is well known to the medical profession of this city.

A year ago I wrote the following:

"The want of skill which he displayed in his first experiments, the false conclusions which he has drawn therefrom, and the thoughtless precipitation with which he has hastened to make known incomplete results without accompanying them with a single qualifying remark, vitiate all the methods to which he may hereafter resort to corroborate his statements." (*Jornal do Commercio*, April 20, 1883).

The mortality among the persons vaccinated on Morro da Viuva furnishes one more proof that I was right in saying this, as I now proceed to demonstrate.

There were vaccinated in this district sixty persons, sixteen removed shortly after the commencement of the epidemic and forty-four remained exposed to its influence; of these twenty-two had the yellow fever, nine of whom died."

I am obliged to judge of Dr. Freire's statistics for the past year in the light of the facts developed by my personal investigations in Rio with reference to his inoculations practiced prior to my visit to that city in 1887; and those members of the profession who are disposed to accord some value to his published figures, are respectfully referred to that portion of my report in which I have analyzed his statistics for 1884, 1885, and 1886.[4] My conclusion is stated in the report referred to as follows: "Our analysis leads us to the conclusion that there is no satisfactory evidence that Dr. Freire's inoculations have any prophylactic value."[5]

MEDICAL PROGRESS.

TREATMENT OF SCIATICA AND OTHER NEURALGIAS.—MORDHORST (*Therapeutische Monatshefte*, June, 1890), states that the diagnosis of sciatica is not always easy, and that inflammatory thickening of the rectus femoris and rostus externus may be mistaken for this condition. It may also be confounded with rheumatic affections of the trochanter major and the muscles covering the hip-joint, especially the tensor vagina femoris, in the tendon of which may be found small masses varying in size from a lentil to a bean. These may be mistaken for true punctata dolorosa, as they are painful upon pressure. In many of these cases the writer has found an excess of free uric acid in the urine, and so concludes that these masses are urates deposited in the tissues.

With these few remarks on diagnosis the author takes up his special methods of treating sciatica, which he has employed for the past four years, and for which he claims the best results. In cases of neuritis—most of these cases belong to that class—it is well to begin with a hot bath of from fifteen minutes to one hour's duration, followed by rest in bed of at least one hour, after which electric massage is to be used after the author's method. This consists of the application of the cathodal electrode having a surface area of at least 100 square cm. to the sciatic notch, while a revolving cylinder connected with the anode is passed down the limb along the course of the nerves. Deep pressure is made when the electrode is drawn downward, but it should only touch the skin lightly when returned, to prevent a break in the current. The author says that stronger currents (from 5 to 10 milliampères) can be used in this way, with a corresponding rapid absorption of inflammatory exudate.

Of thirty-six cases of sciatica treated in this way thirty recovered and six were improved. One case was cured in eight days, but the average length of treatment was from three to six weeks. Of thirteen other neuralgias, ten were cured and three improved.

ABSCESS OF THE BRAIN — RECOVERY.—DR. HANS SCHMID presented to the German Surgical Congress (*Internat. Klin. Rundschau*) a patient, who five months before had received a blow on the head with a beer-glass. At first he was comatose, but no further symptoms developed, and the wound healed in the course of a month with the exception of a small fistula. Six weeks after the injury the patient had an epileptic fit. These became more frequent, he lost flesh, and was sent to the asylum. There he sat anxiously in a corner, dreading every noise and movement, lest they precipitate an attack. The seizures were distinctly epileptic in character, and were preceded by an aura and cramps that began in the right lower extremity. On examination the patient presented a fine fistula in the region where the blow had been received; here a trephine was applied, and a portion of the skull was removed; this opened into an abscess containing 4 or 5 drachms of pus. Convalescence was rapid and full recovery reached with complete cessation of the epileptic attacks.

LYSOL, A NEW ANTISEPTIC.—DR. V. GERLACH presented to the Vienna Medical Society (*Inter. Klin. Rundschau*, June 15, 1890) a new antiseptic and disinfectant. It belongs to the class of coal tar derivatives, is free from carbolic acid, its most important constituent being kresole. Lysol has more antiseptic power than either carbolic acid or creolin, and is not so poisonous. It has a constant chemical formula. It is cheap and abundant. Lysol is not only to be used in closets and to clean linen, but it is especially useful in medicine, as it is almost free from toxic properties. As an antiseptic for wounds it should be used in a strength of 1 per cent.; for washing out the uterus, etc., ½ per cent.

[4] Annual Report, Marine-Hospital Service, 1889, pp. 189-213.
[5] Op. cit. p., 213.

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SATURDAY, JULY 26, 1890.

IMPORTANT MEDICAL LEGISLATION.

The Medical Society of the State of New York is to be congratulated upon the success which, after seven years of heroic effort, it has achieved in the advancement of medical education. To this organization more than to all other agencies or influences, the profession is indebted for the results that have been secured. In view of the action which has been taken by the House of Representatives it did seem for a time as though in the Empire State, where last of all we should anticipate defeat, the hands were to be turned back upon the dial of medical progress, and that in the long-drawn struggle illiteracy, joined hand-in-hand with selfish greed, was yet again to triumph. But at last the better counsels have prevailed and congratulations are in order.

The opposition to the present law, we regret to say, was not confined to sectarian schools alone, nor to such influences as charlatans could wield —but we think, unfortunately for them, some of our medical educators who should have been conspicuous in their efforts to secure the passage of the bill, are numbered with the opposition; seemingly from the fact that as the result of its beneficent working the patronage of their schools would be diminished—as it surely should and will be.

The law approved by the Governor on June 4, 1890, will mark a new era not only in New York but incidentally in the entire country. It cannot be said that in this contest, where every point has been fought out inch by inch, there is evidence of hasty and inconsiderate legislation. The utterances of this bill are like decisions of the Supreme Court, from which there should be no appeal.

In the next number of THE JOURNAL we propose to present the bill entire, and we commend it to the careful consideration of our readers. As the result of such consideration the first cardinal point which occurs to us is this: that the State presumes to reaffirm and to emphasize the fact that it alone has jurisdiction over the practice of medicine within its own limits. It may not only determine as to who may practice medicine, but it also presumes to assert what the qualifications of its practitioners shall be. In the exercise of this power it recognizes the responsibilities which it assumes, and seeks to make the best provision. In the second place, it proposes to redeem the profession from illiteracy by the requirement of a satisfactory preliminary education as a condition to an entrance upon the study of medicine. In the third place, it provides for a definite and uniform standard of examinations, and each and every student must attain to that standard as a condition to graduation. In the fourth place, it divorces medical teaching from the licensing power. To this end the examining boards are under the supervision of special examiners, who are appointed by the regents, and who themselves cannot be members of those boards. And, finally, it compels the colleges to teach their students three years, instead of two.

We have, then, in this single bill, the requirements of preliminary education; a definite standard for examinations; a separation of teaching from the licensing power; and a three years' college course. Thus grandly has the State redeemed itself from what had threatened her, as a sad misfortune. It may be objected that among the provisions of this bill there has been an unwise recognition of sectarian schools. A careful study of the law gives evidence that there is one common power behind the separate boards, and that while they officiate as agents the power of decision rests alone in the Board of Regents. If this board shall perform its duties wisely and well, as we sincerely hope and anticipate, the State of New York will have little cause to fear from the illegitimate practice of medicine so long as the law shall remain in force. Besides, we are confident that a death-blow to sectarian medicine is never so wisely dealt, nor so sure of fatal result,

as when by law all medical students must attain to a high standard of education, and by that standard *stand* or *fall*.

MEDICAL EDUCATION IN ENGLAND.

The General Medical Council—the licensing and registering body for the United Kingdom—has been considering the question of an increase in the time devoted to a medical education. Hitherto the requirement has been a four years' graded course, including, as fundamental studies, the elements of chemistry, botany, physics and zoölogy. In the debate it was stated by SIR JOHN BANKS that in every other country in the world the medical curriculum lasted at least five years—a statement which, unfortunately, some persons in this country know not to be absolutely accurate. The proposition that the course of study should occupy five years was unanimously adopted, with the qualification, however, that satisfactory proof that the student had acquired the necessary knowledge of chemistry, physics and biology elsewhere should be accepted as equivalent to the first year of professional study. The fifth year, according to the proposed plan, is to be devoted to hospital or dispensary work. Six months of it, however, may be spent under the tuition of a practitioner holding a public appointment, or possessing such opportunities of imparting medical knowledge as may be satisfactory to the medical authorities. In order that the student may be able to give undivided attention to practical work during the last year, it is recommended that all examinations except those in the subjects of medicine, surgery and obstetrics should be completed before the commencement of that year. The preliminary examination includes English, Latin, arithmetic, algebra as far as simple equations, and three books of geometry.

With regard to the manner of imparting instruction, the importance of practical work is emphasized, and it is recommended that not more than three systematic lectures a week should be given in any one course, and that no student should be required to attend more than three lectures a day.

The Medical Council makes these propositions in the form of recommendations, although it has practically the power to make them obligatory. Probably the power will be exercised before long, if the recommendation does not prove sufficient.

Will any one assert that these requirements are unreasonably high? Will any one pretend that if such were the standard in this country there would be any insufficiency in the number of physicians graduated, or that their quality would not be greatly improved? Will any one even seriously maintain that it is possible for a man to be a thoroughly competent practitioner of medicine without as much knowledge and experience as are implied in them? No one, of course, will deny that many of those who graduate with a much inferior professional equipment will, in the end, make good physicians—better, even, than many who comply with these requirements. Some will continue their studies after graduation in schools or hospitals, and make up, by their own conscientiousness, for the lack of conscience in those who ought to be the guardians of professional honor and the public health. Too many will, in the long run, acquire at the expense of their patients the knowledge which they ought to have had before they undertook to treat them. Graefe is sometimes credited with the saying that he spoiled a hatful of eyes before he learned to operate for cataract. Such a record may be pardoned to a pioneer in a hitherto unexplored field, but not when the road has already been made broad and plain by the labors of predecessors.

Who are interested in maintaining the present scandalous condition of medical education in this country? Not the great body of the profession, who, whatever may be their own qualifications, can only be injured by the competition of the hordes of half-taught men who are annually poured out by our medical schools. Not the conscientious students of medicine; they are bound in some way to supply the deficiencies of the curriculum, probably at greater trouble and expense than if the extra work they do were part of the required course. Certainly not the public at large. It may even be doubted if the aggregate profits of the medical schools are any larger than they would be with a longer course of study, as it is, to say the least, doubtful if the falling off in the number of students would not be more than compensated by the increased cost to each one. Probably most of those pecuniarily interested would be willing to make the change, if their competitors would do the same. Under the circumstances it seems rather a misfortune that we

have not a General Medical Council or a Minister of Education, or some other central authority, to impose on all what all see would be for the general good.

THE KOLA NUT OF AFRICA.

It has been announced that the Commissary Department of the German Army has been authorized to purchase thirty tons of the kola nut of the Western Soudan. It will be experimented with as an accessory food, to replace to some extent the ration of coffee and other caffeine-bearing substances. According to DR. HACKETT caffeine is not the only active principle in the kola, since he has found in it a red substance to which the name "kolaine" has been given. Other observers, among them GERMAIN SÉE, have asserted that caffeine is the sole energetic principle. The kolaine is said to differ from caffeine in having the property of controlling the waste of tissue during fatiguing exercise, while the latter, caffeine, is a muscle-stimulant. The most conflicting testimony given us by European experimenters with kola will not surprise us, when we bear in mind that, even in the Soudan, the home of the kola-tree, the natives who have been using it for many generations, ascribe very diverse properties to the nut. For example, in the cases of some it will produce sleep, while others will be kept wide awake by it; in some it assuages thirst while in others it has the opposite effect, and so too in regard to the supporting power of the nut under fatigue and muscular effort, the effects are described as being very far from uniform. The "personal equation," for one thing, has a most influential bearing in the study of this, to us, new drug, not only in regard to its alleged tonic and stimulant properties to the nervous system, but also to its employment as an accessory food during convalescence and physical exhaustion. The seeds of the *Sterculia acuminata*, the so-called kola nut, are found in the market mixed with considerable quantities, or proportions, of the seeds of garcina kola and sterculia cordifolia, which are declared to be relatively inert in regard to caffeine, and probably also in regard to kolaine. Here, also, we find an additional possible source for the discrepant results of different experimenters.

EDITORIAL NOTES.

A CHAIR OF THE HISTORY OF MEDICINE.—Referring to the fact that such a chair had been founded in the University School of Baltimore and that Dr. A B. Lyman had been appointed the first professor. The *Lancet* raises the pertinent inquiry why a similar chair should not be established in the various universities in Europe.

THE SHATTUCK LECTURES.—These lectures were founded by the late Dr. Geo. B. Shattuck, of Boston. The first was delivered on June 10, before the Massachusetts Medical Society at its one hundred and ninth anniversary meeting.

QUACKERY IN ITALY.—Some of the methods adopted for the suppression of quackery in Italy might with great propriety be adopted in this country. It is found that in many of the prefects, dentists are not confining themselves to their own art, but are vending medicines, plasters and ointments which, as they assert, "are good for all kinds of diseases," thus infringing upon the prerogative of medical men. The prefects are directed by the Minister of the Interior to use every legal means for suppressing "not only the wrongful exercise of the healing profession generally, but more especially the pompous display of such illegal practices in public places," and the Mayors of Communes are instructed to "forbid such practitioners from occupying public spaces."

A MERITED RECOGNITION.—At the forty-seventh annual Commencement of the Fort Wayne College the degree of LL.D. was conferred upon Prof. W. W. Dawson, M.D., of Cincinnati. This is a timely and just tribute to Dr. Dawson, to whom the medical profession two years ago accorded its highest honor by electing him to the Presidency of the American Medical Association. It is the more complimentary from the fact that only three times in the history of that institution has this degree been conferred.

MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.—W. C. Hollopeter, M.D., has been elected Lecturer on Diseases of Children; and Ernest B. Sangree, M.D., Director of the Histological Laboratory.

BELGIAN QUACKS IMPRISONED.—In Nivelles, Belgium, two quacks, named Vaudevoir and Détret, have been sentenced to six months' imprisonment. Vaudevoir prescribed for patients and

made diagnoses while simulating hypnotic sleep. It was not necessary for patients to come in person, as equally good results were obtained if a piece of soiled linen that had been worn next to the person, was sent. By this method a patient suffering from an anal fistula was treated for a bronchial catarrh. Dr. Garlier, a physician associated with these swindlers, will soon be brought to trial.

THE ONTARIO MEDICAL ASSOCIATION.—This large and growing society held its tenth annual convention at Toronto, on June 11, 12. There were present 244 members, out of a total membership of 653; to this number has the Association grown since 1881, when its organization was effected with only 132 names upon its roll. Dr. Wm. Goodell, of Philadelphia, had been announced to deliver the principal address on the 11th ult., but was unfortunately prevented from attending. There was present, however, Dr. T. Addis Emmet, the veteran gynecologist of New York, who addressed the meeting with an interesting surgical discourse. Dr. Andrew H. Smith, of New York, was also one of the chief attractions of the gathering. He addressed the society on empyema and the mechanical results that ensue upon opening the thorax; his paper was illustrated by apparatus and was followed with closest attention. Other papers, with discussions, filled up the time of the general meeting and some special subjects were disposed of at the meetings of the Sections, the formation of which has been rendered necessary by the increasing volume of the scientific material prepared for the convention.

The following officers were elected for the ensuing year: President, Dr. W. H. Moorhouse, of London; Vice-President, Dr. Charles Sheard, of Toronto; Secretary, Dr. J. Gibb Wishart, of Toronto; Treasurer, Dr. E. J. Barrick. Among those who were elected to honorary fellowship in the Association, were Dr. E. M. Moore, of Rochester, and Dr. T. Addis Emmet, of New York.

THE SHEPARD HOSPITAL FOR THE INSANE.—The late Mr. Shepard, of Baltimore, left $560,000 to found an asylum for the insane, instructing his executors to use the interest only. This was thirty years ago, and the building has been slowly going on until now when the work is nearly finished. The buildings are worth $880,000, while the estate has increased in value to $583,637. The Shepard Asylum is one of the best endowed institutions of the kind in the country.

THE NORTH DAKOTA MEDICAL ASSOCIATION.—This new Association was organized at Jamestown, N. D., on May 27. Dr. H. W. Coe, of Mandan, was elected President; Dr. M. F. Merchant, of Ellendale, Vice-President; Dr. George McIntire, of Hillsboro, Secretary; and A. P. Rounsevell, of Larimore, Treasurer. The next annual session will be held May 25, 1891, at Fargo.

THE SOUTH DAKOTA MEDICAL ASSOCIATION has also been organized and officers elected as follows: Dr. J. W. Freeman, Central City, President; Dr. A. C. Warne, Mitchell, Secretary; and J. C. Morgan, Sioux Falls, Treasurer.

THE NEW YORK MEDICAL REGISTER FOR 1890.—This valuable little annual handbook has just appeared. It contains the registrable data of the 7,635 regular physicians who reside in New York, New Jersey and Connecticut, besides much information regarding pharmacists, nurses, periodicals and books, hospitals, colleges, societies and local laws for those three States. This is the twenty-eighth volume of the series. A copy of the book should be in every reference library in the country. It is published by the Putnams of New York City.

DR. JOHN A. WYETH, the eminent New York surgeon, will deliver the Address before the Mississippi Valley Medical Association, at Louisville, Ky., October 8. Quite a number of gentlemen prominent in medicine in the Mississippi Valley have signified their intention of being present and reading papers. The outlook for the meeting is very encouraging.

ITALIAN STUDENTS IN GERMANY.—Each year the number of Italian students attending the German Universities is increasing. In 1885, the number was 189; in 1886, 224; in 1887, 310; in 1888, 390; and in 1889, 535. Italy, so long the centre of culture and of refinement, is again fast advancing to a foremost position in the medical world, and the glories that were historic give promise in their renewal of still greater achievement in the days to come.

TOPICS OF THE WEEK.

ARABIAN SCIENCE AND LITERATURE.

There is no new thing under the sun; and the same eager curiosity which is felt in the nineteenth century concerning medical and other sciences, together with the thirst for literature, animated no less the men of remote nations and of other minds. This age, proud of its knowledge and inventions, is prone to forget how much it owes to the past and to the labors of others, who sowed that we might reap. To no people are we more indebted for the powerful impetus which was given to science and literature toward the close of the Middle Ages, than to the Saracens, whose intellectual and mechanical genius became a sort of bridge between ancient and modern civilization.

When the Arabians were aroused from their mental torpor by Mohammed, their zeal first took the form of warlike enterprises; but as the passion for conquest died away, all the energy of their keen and searching intellects was directed to the acquisition of knowledge. "Masters," says Sismondi, "of a great portion of the East; of the country of the Magi and the Chaldeans, whence the first light of knowledge had shone over the world; of the fertile Egypt, the storehouse of humane science; of Asia Minor, that smiling land, where poetry and taste and the fine arts had their birth; and of the burning plains of Africa, the country of impetuous eloquence and subtle intellect; the Arabians seemed to unite in themselves the advantages of all the nations which they had thus subjugated."

At a period when the rest of Europe was buried in bookless ignorance, the lamp of learning shed a fair, clear light over Mohammedan Spain, the principal seat of Arabian culture. Seventy public libraries were opened, and at Seville in 1000 A. D. was built the Giralda, the first astronomical observatory on record, and which, after the expulsion of the Arabs from Spain, was converted into a bell-tower for the cathedral.

During the Middle Ages, the Christian populations of Europe seem to have made but little progress either in the theory or practice of medicine. Among the primitive Spaniards, when any one was ailing he came and sat in a public place, and all his friends and acquaintances who passed by brought him such remedies as they fancied might prove beneficial—traces of which custom may still be discerned in America, as every physician knows to his sorrow. It was reserved for their Saracen conquerors to establish the first regular schools of the therapeutic science, where the works of Hippocrates and Galen were translated from the Greek and Latin, and adopted as the basis of instruction.

Toward the end of the tenth century, the great medical treatise by Ali-Ebn-Abbas appeared. It was entitled *El-Melekei*, or "The Royal," and was an enlargement and appendix to the Galenic teaching. Soon after Er-Razi, a professor of the Bagdad medical school, published his writings on pathology, containing the first authentic description of exanthematous diseases. Every other work in the Arab schools yielded precedence to the Canon and Materia Medica of Avicenna, who was born 980 A. D., and received the title of Prince of Physicians. The Canon was divided into five books; the first and second treat of physiology, pathology, and hygiene; the third and fourth deal with the methods of treating disease; while the fifth describes the composition and preparation of remedies.

It was the Arab surgeons who invented the probang, and improved the lancet and couching needle; though in surgical and anatomical knowledge they made but little advancement, in consequence of their Islam prejudices which forbade dissection, while the Koran denounced as unclean the person who touched a dead body. Though chemistry had its rise among the Arabians, it never became a separate science, but, like botany, was studied chiefly as an auxiliary to medicine. The most important mercurial and arsenical preparations of the materia medica, the sulphates of several metals, the properties of acids and alkalies, the distillation of alcohol, were all known to the Arabs. Many terms borrowed from their language, together with the signs of drugs, are still in use among modern apothecaries.

Astronomy attracted much attention among the Arabians, and in the reign of Al-Mamoun, A.D. 813–833, great progress was made in that science. They also acquired much renown in mathematics. It was by means of Arabic translations that Euclid and Apollonius were introduced into Europe. Algebra, decimal arithmetic and numerals we owe to them, while their canals, waterworks, sluices, reservoirs and the like attest their knowledge of hydraulics. They knew how to apply the rules of chemistry to all the necessary arts of life, and no European nation has ever surpassed the Arabians of Spain in agricultural prosperity.

Many inventions whose benefit to civilization is inestimable are due to these sons of the desert. From all antiquity the Chinese had made paper of silk, and this knowledge had extended to Samarcand. When that city fell into the hands of the all conquering Arabs, Joseph Amron carried the process to Mecca, his native city, and about 706 A. D. began to make paper from cotton. This invention spread through the length and breadth of the Mohammedan empire, and in Spain beautiful paper was manufactured from flax in the twelfth century. A century before gun-powder was known in Europe, the Arabians were familiar with it and its uses, an invention which has since wrought a complete change in the modes of warfare that had prevailed for ages. The compass was an Arabic invention, and was commonly used in Nubia as early as the twelfth century.[1]

In the interests of botany and mineralogy, scholars spent their lives in travel and laborious research. Schools, colleges, academies and libraries sprang up under the generous patronage of the caliphs. During the reign of the noble Haroun-Al-Raschid and his illustrious son a school was attached to every mosque, and, as in New England under the sway of the Puritans, religion and education went hand in hand.

Philosophy, history, poetry, theology, grammar and

[1] This invention is claimed by the Chinese and by the Italians.

theotric were assiduously cultivated, and historical dictionaries were invented. The Oriental mind took special delight in story telling, and we can form some idea of the splendor of the Arab imagination from the Arabian Nights' Entertainments, which give pleasure to old and young.

It was doubtless a great surprise to the old Crusaders when they found the abhorred Mussulmans superior to themselves in polish, culture and scientific attainments. Though the verdict of later ages has condemned the religious enthusiasm which sent the chivalry of Europe over land and sea to rescue Palestine from the Saracen, their labor was not all in vain; for among them were men of noble, elevated minds, who were capable of receiving and assimilating truth and knowledge from whatever source it came, and when they returned to their own lands they carried with them precious seeds, which in the fulness of time were to bear such mighty fruit in the Revival of Learning, the Renaissance, the Reformation, and the blessings of civil and political liberty.—Stoddard, in *Classics.—Pacific Record.*

HONOR TO JOHN HOWARD.

At the great Congress for Prison Reform just concluded at St. Petersburg, one of the most successful sittings was the second, at which the distinguished crown lawyer, M. Spassowitsch, delivered an address on the two philanthropists of the eighteenth century—John Howard and the Italian Beccaria, both of them beneficent innovators in the treatment of the criminal classes. The address, from the interest of its subject and the reputation of M. Spassowitsch as one of the most brilliant orators of the Russian bar, attracted a numerous audience, which included many of the leading figures in St. Petersburg society. Referring to the fact that one hundred years ago John Howard closed the beautiful pilgrimage of his life on Russian soil, and left all that was mortal of him in the neighborhood of Cherson, M. Spassowitsch drew a striking picture of the philanthropist's last resting-place, on which stand a sun-dial and tablet, the latter bearing in Latin the touching inscription: "Whoever thou mayest be, thou standest at the grave of thy friend." Then followed a vivid sketch of Howard's career, with all its incidents, often romantic, ever redounding to his honor; and finally, a comparison of the reforms he initiated and brought to completion with those protected, in part successfully, by the Italian jurist Beccaria. The concluding words of the address were these: "I fain would have contented myself with pronouncing the name of this one philanthropist only, the English Howard, but I was unable to do so, for ever in my thoughts live the two benefactors of mankind, who are inseparable. Honor and fame be rendered to the glorious pair, the authors of the criminal reform of the eighteenth century, John Howard and Beccaria. Honor and fame to the people whose virtues are personified in them, the Saxon and the Latin. Honor and fame to the nations from which they have sprung. Long live England; long live Italy!" The rounds of applause with which these words were received attested how fully they had interpreted the unanimous feeling of the Congress; and in the evening at the state banquet, at which the chief authorities of Russia, civil and military, were represented, toasts were given and acknowledged in the spirit which, earlier in the day, had found such genial expression in the address of M. Spassowitsch.—*Lancet.*

VITAL STATISTICS IN FRANCE AND GERMANY.

The following figures drawn from the publications of the German Imperial Statistical Office and the French *Journal Officiel*, respectively, are interesting as showing that if Napoleon's saying that "Providence is always on the side of the big battalions" is true, France will have little chance in any future struggle with Germany if the gospel according to Malthus continues to be accepted by her people as the whole duty of married man. In 1888 there were in the German Empire 376,654 marriages, 1,828,379 births and 1,209,793 deaths, the excess of births over deaths being 618,581, as against 605,155 in 1887. In France in the same year there were 276,848 marriages, 882,639 births, and 837,867 deaths, the excess of births over deaths being only 44,772, as compared with 56,536 in 1887. In Germany the marriages in 1888 exceeded those of 1887 by 5,995, and those of 1886 by 4,328; in France, on the other hand, there were fewer marriages in 1888 than in 1886 by 6,360. In Germany the birth-rate has been steadily rising since 1884, the increase in 1888 as compared with 1887 having been 2,818, and 78,505 as compared with 1883. In France there was a falling off in the number of births to the extent of 16,794 as compared with 1887, and the number was the lowest recorded since 1871. Since 1884 the birth-rate has been gradually falling, the difference between that year and 1888 being about 55,000. In round numbers the birth-rate in Germany is 38.1 and in France 23.1 per 1,000 inhabitants, while the excess of births over deaths is 12.9 per mille in the former, as against 1.1 per mille in the latter. Of the 87 departments in France, in only 44 was the number of births greater than the number of deaths; in the remaining 43 there were more deaths than births.

INTERNATIONAL MEDICAL CONGRESS.

In connection with the exhibition during the Congress at Berlin, the Imperial Board of Health is engaged in forming a special department for the illustration of medical and sanitary appliances. It is hoped that the various hygienic institutes and laboratories, as well as instrument makers and others, will largely contribute to the exhibits. The larger German towns will also probably show plans, etc., of the sanitation works carried out within them. All communications connected with this exhibition should be addressed to the Exhibition Committee, Karlstrasse, 19, Berlin, as soon as possible. At the request of the organizing committee of the Congress the following gentlemen have consented to form a Scottish committee in order to facilitate arrangements as regards Scottish members of the Congress: Mr. Joseph Bell, Mr. G. A. Berry, Mr. John Duncan, Professor T. R. Fraser, Professor W. T. Gairdner, Dr. G. A. Gibson, Dr. P. M'Bride, Sir George Macleod, Dr. Peel Ritchie, Professor A. R. Simpson, Professor Grainger Stewart, Dr. Tuke, and Sir William Turner. Professor Grainger Batty Stewart has been invited to accept the office of president of the committee.—*Lancet.*

PRACTICAL NOTES.

A HINT FOR FACILITATING THE MICROSCOPICAL EXAMINATION OF URINE.

When attempting to examine urine under the microscope, for casts, epithelial cells, and other organic bodies, a good deal of annoyance and difficulty is sometimes caused by urates, and also, when the specimen is not quite fresh, by fermentation and putrefactive products. In order to obviate this difficulty, and with the further view of preserving the specimen, Dr. M. Wendringer advises that the urine should be mixed with a nearly saturated solution of borax and boracic acid. This dissolves the urates, and keeps the urine from fermenting, and at the same time exercises no destructive effects upon the casts and epithelial elements which it is desired to examine. The solution is prepared by mixing twelve parts of powdered borax in one hundred parts of hot water, and then adding a similar quantity of boracic acid, stirring the mixture well. It is filtered while hot. On long standing, a small deposit crystallizes out, but clings to the side of the vessel, so that it does not interfere with the transparency of the liquid. The urine to be examined is put into a conical glass, and from a fifth to a third of its bulk of the boracic solution added to and agitated with it. The urine will be found to have become clear in a short time, *i. e.*, if there is no cloudiness due to bacteria; and it will remain unchanged for several days. If it is only wanted to clear the urine and to make it keep for a day or two, the addition of a smaller quantity of the boracic solution is sufficient. If a third of its bulk is added, no fermentation or putrefactive processes take place, even if the glass is left uncovered in warm places. Albumen, too, if it exists, is not coagulated. The organic elements—as epithelial cells, casts, blood corpuscles, etc., collect so quickly, without undergoing any morphological change, at the bottom of the glass, that the first drop taken up by the pipette, usually proves a satisfactory specimen.—*Lancet.*

DEATH FOLLOWING A URETHRAL INJECTION OF COCAINE.

Simes, in a recent number of the *Gaz. degli Ospitali*, records a somewhat remarkable case of death occurring after an injection of cocaine into the urethra. The patient was a man of 28 years of age, and preparatory to undergoing the operation of internal urethrotomy, had a gram of a 20 per cent. solution of cocaine injected into his urethra. Saving his urethral stricture the patient was in exellent health. Immediately after the injection the following phenomena supervened, namely, contraction of the muscles of the face, dilatation of the pupils, stoppage of the breathing, and violent epileptiform convulsions. The convulsive signs continued to increase in severity, the respiration became more and more feeble, cyanosis became intense, and at the end of about twenty minutes, despite every care, the patient died. At the autopsy the lungs were normal, but extremely congested; the left ventricle contained no blood.—*The Medical Press.*

THE TREATMENT OF FLATULENT DYSPEPSIA.

In *Les Nouveaux Remèdes*, April 8, 1890, Dr. Huchard publishes a number of formulæ, which are claimed to be of value in the treatment of dyspepsia, especially with a view of preventing the development of flatulence. Among the remedies which the author has found most satisfactory, chloroform is the best. On account of its irritant action it should not be given in a state of purity or in capsules, as is so frequently done. The best mixture is claimed to be its administration in saturated chloroform water:

℞ Saturated chloroform water, 150 parts;
Distilled water, 120 parts;
Mint-water, 30 parts.

Of this mixture a tablespoonful may be taken either immediately before or during a meal.

The same dose may also be taken of the following formula:

℞ Saturated chloroform water, 140 parts;
Orange-flower water, 150 parts;
Tincture star anise (*Illicium anisatum*), 10 parts.

In the following preparation the chloroform is associated with gastric stimulants:

℞ Tincture of gentian,
Tincture of anise,
Tincture of nux vomica, āā . . . . . ʒj;
Chloroform-water, ... 20 to 40 drops.

After filtration, 10 to 20 drops of the above may be taken in a little water a quarter of an hour before eating.

When it is desired to employ the so-called absorbing powders the following formulæ may be prescribed:

℞ Powdered charcoal . . . . . ʒij;
Sodium bicarbonate . . . . . ʒj ½;
Calcined magnesia . . . . . ʒj;
Powdered colombo . . . . . ʒss.

Make 40 powders. One powder may be taken half an hour or an hour before, or, if an antiseptic action is desired, at the time of, eating:

℞ Beta-naphthol,
Salicylate of bismuth,
Magnesia, āā gr. xlv.

Make 30 powders, which may be administered as above.—*Therapeutic Gazette.*

OBSTRUCTION OF THE NOSE.

In treating obstruction of the nose, quinine and belladonna or cocaine will relieve the congestion; the patient also should snuff up the nose a mixture of camphor and boric acid; a cold bath to be taken each morning, to prevent taking cold.—*Coll. and Clin. Record.*

SOCIETY PROCEEDINGS.

Medical Society of the District of Columbia.

Stated Meeting, December 18, 1889.

THE PRESIDENT, DR. CHARLES E. HAGNER, IN THE CHAIR.

DR. SWAN M. BURNETT presented a patient with *Tuberculosis of the Conjunctivæ.*

DR. C. W. RICHARDSON presented a patient showing a *Double Uvula*, and also read a paper on

ADENOID GROWTHS IN THE NASO-PHARYNX.

I offer no other excuse for bringing this subject to your consideration than its importance, which causes it to merit a thorough and exhaustive treatment at your hands.

Considering the lymphatic system of the pharynx as consisting of a continuous chain, presenting here and there aggregations forming the so-called tonsils, one would expect that changes incident to the one mass would be manifested also in the others. This has been acknowledged. These masses, or aggregations of lymphatic tissue, are variously designated lingual, faucial and pharyngeal tonsils. To-night we shall deal with the upper arch of the circle, the pharyngeal tonsil, which, when subjected to certain pathological changes, is known as "adenoid growths." These glands may be affected, I do not doubt, with many of the acute inflammatory changes to which its fellows, the faucial tonsils, are prone. According to Knight, Delavan and others, acute inflammation attended with marked enlargement of these glands has given rise to alarming symptoms; seeming errors in diagnosis have also resulted from these acute enlargements. In this article we have not to do with these acute hypertrophies (enlargements), but rather with that chronic—the result of frequent attacks of the acute form—or congenital condition coexisting almost with the birth of the individual. These growths do not make themselves manifest in any unpleasant manner until about the third year, although cases sufficiently urgent to require operative interference have been met with as early as the ninth month of life. They are said, like the other glandular tissues of the same group, to undergo atrophy about the age of puberty. This is true to a great extent, yet it must be accepted only in a relative degree.

These glands, when diseased and subjected to enlargement, vary greatly in number, size, density and position. Their density depends upon the amount of connective tissue present. Where glandular tissue is in excess, they are soft, friable, and readily break down under the finger. Should connective tissue predominate, they are dense, tough, and can only be torn away by the use of considerable force. They may vary only slightly from the normal, or may completely fill out the naso-pharyngeal cavity. They may form a curtain-like mass extending transversely across the vault, more or less completely occluding the choanæ, or hang stalactite-like, round or clubbed-shaped at their extremities. They may form gigantic granules in the upper portion of the post-pharyngeal wall, or accumulate in masses around the orifices of the Eustachian tubes and filling out the fossæ of Rosenmüller.

The symptoms produced by the existence of this condition vary according to the amount of growth present, and the interference it causes to the performance of the physiological functions of those parts and organs dependent upon an unobstructed naso-pharyngeal cavity. A typical picture of that form of adenoid growth, causing sufficient impairment of the general health and special organs as to imperatively demand operative interference, I will attempt to delineate. You will find before you a child whose age is considerably in excess of his physical development. The facial expression is characteristic: complexion pale, face long and thin, cheeks sunken, nose pinched, eyes heavy, and a dark ring is usually observed below them, intensifying the want of color, the mouth is agap, and the lower lip, thickened and protruding, droops, thus exposing the lower teeth. As he sits, the whole countenance gives the impression of stupidity. The chest is small and contracted; examination will frequently reveal the existence of the characteristic chicken breast. When he responds to interrogations it will be noticed that his voice has a peculiar muffled, flat, dead sound, the pronunciation of the nasal consonants being entirely lost. They complain of want of energy, heaviness about head, a sense of constriction about chest, no desire to play with fellow, and of rapidly occurring fatigue when exercising. They are universally bad sleepers—in fact they never experience a night of continuous, uninterrupted, blissful repose until the growths have been removed. They toss about in bed, are extremely restless, have bad dreams, causing them to cry out in sleep, and on awakening to be greatly frightened, perspire about face and head, snore, and withal a peculiar method of respiration which is characteristic, *i. e.*, the inspiration being very much delayed after expiration, so as to cause a casual observer to fear that respiration has ceased. It is marvelous how these children, having their rest disturbed, possess the vivacity that is common to them. The information is elicited from parents or guardians that they have little inclination for study, and are consequently backward. This want of desire for study, or inability to hold the attention fixed upon any continuous thought or train of ideas, is a frequent manifestation in diseases of this character. They will read a sentence, and almost as quickly forget it; constant

repetition is indispensable to the acquisition of any information. This constant strain places the child at a great disadvantage. Finding they so readily forget, they become discouraged and throw their books aside. This condition may exist with regard to all subjects, or may affect the mind only in connection with particular ones. Prof. Guge, of Amsterdam, first called attention to this phenomenon, and to it he has given the name of aprosexia. Headache, fulness over the frontal sinuses, or a dull feeling about the head is always present. It will be observed, on inquiry, that the sense of smell does not exist, or is in abeyance. On testing the nasal cavities it will be found that they do not permit the passage of air, respiration being carried on solely through the buccal cavity. It will be observed, on examination with speculum, that the nasal cavities are sufficiently patulous to permit of free nasal respiration, so far as the anterior part of these chambers is concerned. When the obstruction to nasal respiration is complete, the mucous membrane is pale, of a pinkish hue, and the turbinated bodies present a condition on to atrophy rather than that of hypertrophy; but when obstruction is not absolute, the membrane is frequently congested. The faucial tonsils are frequently hypertrophied, presenting considerable enlargement, although the two conditions do not necessarily coexist. Another condition noted in the buccal cavity, dependent upon the existence of these growths, is the high arching of the hard palate. Deafness exists, more or less marked—perhaps a suppurating ear—and this condition, rather than the more distressing want of nasal respiration, has driven the parent to consult you. Salivary secretion may be, but nasal and post-nasal secretions are always in excess.

The pen picture I have just given is typical of this condition, and the symptoms those usually met with in cases where the growths exist in sufficient quantities to give rise to interference with nasal respiration.

Such a case as the one just enumerated would give rise to the inquiry as to where the obstruction existed. The nasal cavities are patulous, the oral pharyngeal cavity presents no obstruction; where can obstruction exist excepting between the two? It is only through the aid of the rhinoscopic mirror, or by digital exploration of the naso-pharyngeal cavity, that a positive diagnosis can be obtained. Some authorities depend solely upon the mirror, while others assert that no positive diagnosis can be made excepting through the aid of the index finger. I constantly employ both methods, the information obtained by the one being substantiated, strengthened and increased by the other. It is usual for me to make a rhinoscopic examination, and the evidences of the existence of the growths and their position having been obtained, then to resort to digital exploration, in order to obtain information as to their extent and size. I never use means to hook forward the soft palate in rhinoscopy; I do not deny the possible usefulness of these agents, but think that many who resort to them could, by the exercise of the tact and patience they usually possess, soon find these artifices useless crutches. By the mirror we will observe these growths hanging like stalactites or rounded club-like masses from the pharyngeal vault, forming curtain-like masses, obstructing the view of the post-nasal orifices and filling out the inequalities in the lateral wall. It is only through the sense of touch that we are able to grasp the full idea of the extent of these growths. One must possess a well educated tactile sense, and a thorough knowledge of the topographical anatomy of the naso-pharyngeal cavity, in order to appreciate the information to be gained by this method of investigation. In making these investigations I never explain to the patient what my intentions are, unless they obstinately demand the why and wherefore. The method of procedure is as follows: Seated to the child's left, facing and slightly in front of it, the left hand being placed upon the head to give it support, he is requested to open widely the mouth. While the mouth is thus widely agap, and before they appreciate my intention, I rapidly insert the index finger of the right hand into the buccal cavity and onward to the post-pharyngeal wall, where the finger is usually arrested by the contraction of the pharynx and elevation of soft palate. This, the first and only resistance, is readily overcome by a little persistent and forced pressure. After passing constriction, the finger passes into the naso-pharyngeal cavity. Here the finger must be swept rapidly over choanæ, vault, orifices of Eustachian tubes, fossæ of Rosenmüller, and post-pharyngeal wall. The experienced finger will readily detect growths by their peculiar velvet-like feel, also likened to the sensation produced by feeling a bunch of earth-worms. These procedures must be accomplished with great rapidity, as the struggling child usually releases himself or forces you to release him in a few seconds. Unless the child under examination is remarkably tractable—I have seen several—the examination must be done thoroughly, as they will never, while retaining consciousness, permit another exploration. While these are the train of symptoms present in complete obstruction, there are cases attended with only partial obstruction, and others in which there is no obstruction to nasal respiration, although growths exist of sufficient size to give rise to annoying symptoms that can only be ameliorated by the removal of the hypertrophied glands. It is especially to this latter class of cases, and the relief of symptoms produced by them, that I wish particularly to direct your attention. This class manifest themselves by ex-

cessive nasal or post-nasal secretion, more or less impairment of the organ of audition, and a peculiar muffled sound of the voice. Secretion and excessive secretion is one of the most constant and, I might say, never failing evidence of the existence of this condition. The quantity of secretion is not always in proportion to the amount of glandular hypertrophy, nor can it be said to be in inverse ratio, although I have seen greater secretion in cases where simple knobs or protuberances existed at the vault, than where there was growth sufficient to completely occlude the post-nasal orifices. That this excess in secretion is dependent upon existence of the hypertrophied glands, and not entirely due to the catarrhal condition of the mucous membrane, and for the following reasons, viz.: There are a number of cases upon which we have employed every method usually successful in checking excessive secretion in nasal and post-nasal catarrhs, without any result whatever, where the subsequent resorting to operative interference, with removal of knobs, protuberances and existing masses of growth, have been attended with complete relief. By the restoration of many of these cases to the normal condition with operative interference alone; by the complete relief, by operative interference, of cases which have been subjected for months to a rigid course of nitrate of silver, iodine solutions, and various other agents employed in the hands of others. There also exists a class where the removal of hypertrophies, while not completely relieving the catarrhal secretion, yet lessens it to so great an extent that its complete cessation can be brought about by a little further judicious treatment. It is not necessary for me to give a long citation of cases to prove the facts mentioned above. I will mention a few while exhibiting specimens that I have brought to illustrate my paper. The importance of this condition as a factor in the production of excessive post-nasal secretion is, I regret to say, greatly overlooked. Many authorities, in writing upon this important subject, completely overlook this point, and to so great an extent as not to insist upon the necessity of complete removal of all existing growth—it is only necessary to remove as much as will give rise to free nasal respiration. Such dogmas I class as equal to those which state it is only necessary to remove a small portion of the faucial tonsils. I remove these as thoroughly and completely as I remove the faucial tonsils. There are a large number of cases under treatment, classed as post-nasal catarrh, dependent upon diverse pathological conditions, and which can not be treated intelligently or judiciously without first being subjected to a rhinoscopic or a digital examination, preferably both. It is largely due to the injudicious treatment, brought about by an imperfect knowledge of the pathological condition, that accounts for the large number of incurable cases of post-nasal catarrh and the opprobrium which exists with regard to the medical treatment of this condition. The importance of this can be illustrated no better than by mentioning the fact that of all children treated by me during the past twelve months in whom post-nasal catarrh existed as a prominent symptom, in over 50 per cent. there was present more or less hypertrophy of glandular tissue at vault of pharynx, removal of which, and restoration of the dome to its normal condition, was attended with the relief of all unpleasant symptoms. Disease of middle ear, catarrh, acute inflammation and suppurative inflammation are frequent concomitants of adenoid growths, and it is the existence of these conditions that frequently drives these unfortunate sufferers to our observation. Besides these cases where ear symptoms are so marked as to be observable to patients, there are others where commencing changes are only observable after careful examination. In this latter class operative interference is as imperative, in order to remove the existing cause and thus enable us to radically remove the condition, as in the former; in fact I consider operative interference a demand in all cases where adenoid growths exist, even though the ear be not involved, simply as a precautionary measure to prevent, at any subsequent period, the occurrence of an invasion of this important region.

Treatment.—As can be judged from previous remarks, there is, according to my idea, only one course to be pursued in the treatment of this condition—the complete and thorough extirpation of all hypertrophied tissue. It is unwise for one to dictate any special operative procedure, or the necessity of using any peculiarly constructed instruments, as essential in the operative treatment of these growths. In this connection, while not doubting that in some cases the index finger of certain surgeons might be capable of removing these glands, I doubt very much the index finger of any one possessing sufficient force to remove the firm fibrous growths I have observed in many of my cases. A much discussed question in this connection, and over which the most diverse opinions are held, is as to the advisability of producing general anæsthesia, and as to whether this state should be produced through the aid of ether or chloroform. Some assert that the operation is as painful as the amputation of a finger; others that it is almost painless. I consider the operation as far from being as painful as the former, or as completely devoid of pain. It is not necessary for me to give a résumé of the various instruments and operative procedures resorted to in removing these growths. I shall give you the method I usually adopt, and which I consider most expedient. I use the forceps, and they are made on the plan of the instrument devised by Löwenburg and modified by Franklin Hooper,

varying slightly in curves at cutting extremities. In regard to general anæsthesia, I accept a middle ground. Should the patient be under 10, over that age and timid, or desire the use of an anæsthetic, I always administer ether. Should the patient be over 10, and one in whom I may expect hearty coöperation, I usually operate with the aid of cocaine. In operating under general anæsthesia I adopt the upright position. The patient, being in the recumbent position, is thoroughly anæsthetized until relaxation is complete. He is then loosely bound in a sheet, head alone being free, and thus securely prevented from interfering with the operation he is placed in an upright position in the arms of an assistant. I always have the head of patient resting upon assistant's left shoulder, so that he can encircle head with corresponding arm, thus holding patient's head firm. Gag having been placed in mouth, the index finger of left hand is passed behind soft palate, where it acts not only as a guide to location of growths, but also as a palate retractor. The growths are now seized by forceps, guided by the right hand, and rapidly torn from their attachment. All having been removed, it is well to scrape over the mucous surface before removing index finger from pharyngeal cavity. The operation can be done so rapidly as to be completed before the patient has begun to be aroused from the quite profound anæsthesia. I have no fear of hæmorrhage in these cases, nor of the supposed danger of blood passing into larynx. Hæmorrhage is quite slight, and the small quantity of blood produced always passes into gullet. In this operation I always depend upon the sense of touch. In the second class of cases I simply resort to the local use of a 5 to 10 per cent. solution of cocaine. If the patient possesses sufficient fortitude and growths are not abundant, I usually finish the operation at one sitting. More frequently I resort to several sittings. In these cases I sometimes operate with, but more frequently without the aid of mirror. I call the mirror to my aid when growths are situated well forward or about mouth of Eustachian tube, a region where I am afraid of doing harm. Patients state that operation is painful, but I am sure that none find it quite as painful as they would the amputation of a finger; nevertheless, they come again, and I have never known one to fail an appointment. The after-treatment is very simple. There is nothing to do excepting the occasional spraying out of the naso-pharyngeal cavity. Before closing I must again insist upon the absolute necessity of the removal of every particle of growth present, and the complete restoration of the vault to its dome-like appearance.

Dr. Bryan said the subject of adenoid vegetation in the nasal pharynx was one that had greatly interested both the laryngologist and aurist since Meyer, of Copenhagen, first called attention to the disease, in his original paper, by reporting 102 cases.

A fact that did not seem to be brought out in Dr. Richardson's paper is, that there are two stages of this affection: In the first stage, found in young children, the tissue is soft and friable, breaking down readily under pressure; in the second stage, which we find in later life, the tissue is hard and resisting to the touch, due to the increase of fibrous tissue. We do not speak of acute hypertrophy, for that condition is a result of chronic inflammation, and Dr. Delavan's case, which Dr. Richardson had quoted, could hardly be regarded in the light of a true hypertrophy of the tissue in the vault of the pharynx, but simply a swelling of the membrane, due to some temporary cause, and which disappeared as soon as the cause was removed. In young children the finger is a much more valuable aid to the diagnosis than the mirror; and in adults even, the mirror frequently gives us no idea of the extent of the diseased tissue, which can only be positively determined by the use of the probe.

In operating upon young children he always used ether, with the patient in the prone position, with the head depressed below the level of the shoulders. In this way there is no possible danger of blood, or excessive faucial secretions, getting into the trachea. When the patient is old enough, the operation is best done without the aid of an anæsthetic. In such cases he found the self-retaining palate retractor of great aid. Another valuable instrument for operating upon this condition is Bosworth's Post-Nasal Curette which, together with the post-nasal cutting forceps of Gleitsman, will enable us to remove most, if not all, of the diseased tissue at one sitting.

Dr. Murray coincided with Dr. Bryan in his view of hypertrophy. He thought with him that the recumbent position was the proper one whenever an anæsthetic is to be administered. Dr. Richardson has said that he has no fear of hæmorrhage in these operations, but serious hæmorrhage does occur; he probably meant that he did not fear hæmorrhage in the cases which he selected for operation. Dr. Murray was under the impression that at the last meeting of the American Laryngological Association a death was reported from hæmorrhage due to this cause. While attention had been called by several men, among the number Voltolini, who reported two cases, prior to the discussion of the subject by Meyer, of Copenhagen, he was the first to give an accurate description of the disease and its proper treatment. He found that in two thousand cases examined, the disease occurred in the proportion of one per cent. Doyer, of Leyden, says that five per cent. of school children are affected with the disease. Dr. Murray believed that in finding fifty per cent. of all the children brought to him to be suffering from the disease,

Dr. Richardson had had an unusual experience. The contraction of the chest found in these cases Luenberg had ascribed to the efforts of the diaphragm to overcome the obstruction to respiration caused by the growth in the naso-pharynx, the contractions corresponding to the attachment of that membrane to the parieties.

DR. RICHARDSON in closing the discussion said that he had used the word hypertrophy to mean enlargement, *i. e.*, simple inflammatory enlargement, and it was frequently used in such sense. Ether had never caused excessive salivary secretions in his cases. He had no fears of hæmorrhage. He had heard of hæmorrhage from tearing the mucous membrane; and whenever it occurred he attributed it to such tearing and not to the cutting of the adenoid growths.

FOREIGN CORRESPONDENCE.

LETTER FROM PARIS.

(FROM OUR REGULAR CORRESPONDENT.)

Dr. Duplay's Address at La Charité Hôpital—The Pasteur Institute.

Dr. Duplay, who was recently appointed Professor of Clinical Surgery at La Charité Hôpital in the place of the late Professor Trélat, delivered a most interesting lecture on assuming his office. After having rendered a just tribute to the merits of his predecessor, he began by criticizing certain surgical tendencies which are just now in vogue in the profession. He said that within the last 15 or 20 years, a complete transformation has taken place in surgery. The introduction of antisepsy in surgical practice has contributed largely to this transformation. It is scarcely 20 years ago, in certain hospitals, and particularly in certain seasons, the smallest surgical intervention, or the most simple incision was followed by the occurrence of terrible accidents such as lymphangitis, phlegmon septicæmia, pyohæmia, etc. Antisepsy has altered all this, it has considerably diminished the duration of the treatment after an operation. Union by first intention which always failed to take place, is now the rule, and the wound resulting from the ablation of the breast, which took two months and more to cure by suppuration, is now healed by first intention in about eight days. Moreover, thanks to antisepsy, the surgeon can undertake with comparative safety operations which, formerly, he had not dared to do. He now fearlessly opens the articulations, and practices on the abdomen, in the diseases of the genital organs in women, the most daring operations. But while saying so much in favor of surgical antisepsy, Dr. Duplay pointed to the reverse side of the medal. He observed that there was a sort of operating mania, a *prurigo secandi* among certain surgeons, particularly among the young generation which he explained thus: Formerly, owing to the frequency of post-operative accidents, the surgeon decided upon intervening only when an operation appeared absolutely indispensable. Now, on the contrary, post-operative accidents have disappeared. Trusting to this impunity, the surgeon has a great tendency to intervene as soon as an operation appears practicable. The older surgeons hesitated a good deal to operate owing to the occurrence of consecutive accidents, they consequently carefully examined the parts affected, the general state of the patient, his temperament, and his antecedents, in a word the surgeon sought to make a rigorous diagnosis. Then the utility of the operation was discussed at some length, the question, if the chances of cure were equivalent to the gravity of the disease, was carefully weighed. Now, all these considerations had become secondary and often the diagnosis is effected by the operation. When it concerns a tumor, the surgeon scarcely occupies himself as to its nature. The tumor is removed, and, it is afterwards examined at leisure. In cases of an affection of the abdomen, the surgeons of to-day do not make those brilliant and delicate diagnoses made in former times. The abdomen is opened, the surgeon looks into it, and if there is nothing to be removed, he closes it. The same remarks may be applied to prognosis. The question whether the patient could be cured by other means was scarcely discussed, nor whether the benefits of the operation were sufficient to justify it. It is thus that the surgeon practiced on the face the most terrible operations for cancers of the tongue, pharynx, etc., and the patient succumbed with or without relapse, a few weeks after, without obtaining the least profit by the intervention. The ablations of the thyroid gland in goitrous subjects may seem very fine as operations, but, afterwards, the patients become affected with cachexia. In the midst of the hecatomb of Fallopian tubes and ovaries which some surgeons give themselves to, it is not considered whether a certain number of patients could be cured by other means. In depriving a patient of the reproductive faculty we give rise to troubles more or less serious in the patient's physical and moral condition. In all operations even when practiced under the strictest rules of antisepsy there is still one danger to be considered, and that is the least negligence in the application of this method suffices to compromise all. A catgut of bad quality, a solution very weak, a sponge badly prepared, might destroy one's assurance. Limited space will not permit me to enter more fully into Professor Duplay's interesting lecture. He concluded by observing that in this surgical revolution as well as in all others, there is good and bad, and he recommended that while the antiseptic

method should be religiously observed, clinical observation should never be neglected.

On June 4 a general meeting took place at the Pasteur Institute, when a report was read concerning the progress of the antirabic inoculations since the foundation of this method of treatment. The Institute is divided into two grand departments, viz.: one for treatment and the other for experiments. The treatment consists in simple inoculations, to which the French and foreigners bitten by a mad dog are submitted. Persons undergoing treatment are divided into three categories: 1. Persons for whom the rabies of the animal that bit is experimentally demonstrated by the development of rabies in an animal inoculated or bitten at the same time as the persons treated. 2. Persons for whom the rabies of the animal that bit is established by veterinary examination. 3. Persons bitten by animals suspected of rabies. The following is a statistic of the results obtained:

Year.	Persons treated.	Deaths.	Mortality, per cent.
1886	2,671	25	0.94
1887	1,770	13	0.73
1888	1,622	9	0.55
1889	1,830	6	0.33
Total	7,893	53	0.67

It may be remarked that the proportion of deaths is very feeble, and that the mortality is diminishing every year. This diminution is due to a better application of the treatment. M. Pasteur observed that it was at first difficult to know which formula of treatment should be adopted. He decided upon proportioning the injection to the gravity of the bite. In order to regulate this treatment he found it necessary to divide the bites into three categories: 1. Bites on the head and on the face. 2. Bites on the hands. 3. Bites on the limbs and elsewhere. In these three last years, of 7,893 persons treated 672 were bites on the head, 4,387 were bites on the hands, 2,834 were bites on the limbs. Thus it may be seen that the bites on the hands (56 per cent.) were very frequent. To the question as to whether rabies is more prevalent in some places than in others can only be answered by the creation of antirabic institutes in different parts of the world. It may, however, be observed that climate has no influence upon the question; and, contrary to what is generally supposed among the public as regards the influence of seasons, the maximum of cases takes place at the end of winter and at the commencement of spring. In June and July rabies diminishes, and increases after October till the month of February. A. B.

In the German Empire, during the past five years, there has been an increase of 25 per cent. in the number of cases of insanity, against an increase of 3.5 per cent. in the population.

DOMESTIC CORRESPONDENCE.

Dry Method of Treating Wounds, or Antiseptic Surgery a Myth.

To the Editor:—With your permission I would like to make a brief reply to my friend Dr. Miller, of Helena, Mont., who along with a few other brave souls, has planted himself in front of the flood of antisepticism that is sweeping around the world, and proposes to turn back the tide and wipe out with a few strokes of the pen the supposed scientific labors of Pasteur, Koch, Lister and all that genus. Listerism—antisepticism, is reduced, according to his estimation, to a piece of common *Castile soap*, a basin of *slough water*, a *common kitchen towel*, dried in the air simply, and a bunch of *absorbent cotton!* If this is not what he means, then what does he mean?

Does he insist that the towel shall be ironed out with a very hot iron just before use, or that the water shall be boiled for ablution purposes? It does not so appear. If he admits the necessity of thus ironing the towel or boiling the water, he takes the force out of his pretended argument against antiseptic methods. The doctor was careful not to use the term aseptic, or mention the necessity of keeping a wound in an aseptic condition, for this likewise would have spoiled the best argument he could have made against Listerism or antisepticism. The moment a man acknowledges the importance of the aseptic condition of wounds, then he acknowledges that there are septic agencies to combat. Henceforth it becomes a matter of methods.

The doctor says in the first part of his article (July 5) that all the benefits of wound dressing "are summed up in cleanliness, and the practically dry and infrequent dressing."

Again he says: "If microörganisms were the cause of the unfavorable results of wounds, it has long since been demonstrated that any of the so-called germicides, to be efficient, would likewise destroy the patient."

And again in the last paragraph he says: "I had reasoned that if there were inimical germs in the air, they were likely to be worse in the water, the former being nature's purifying agent."

If the three above quotations are considered carefully they convey considerable confusion of thought. Can any one tell whether the doctor believes there are any germs anywhere inimical to wound healing? Either there are or are not such germs. We must all take one side or the other of this question. There is no middle ground. If there are no germs inimical to wound healing in the atmosphere or in water, why do these gentlemen insist upon or even concede the necessity of "scrupulous cleanliness" in operations or the dressing of wounds? Cleanliness from what?

And how do we obtain that end? If there are no germs that promote suppuration, septicæmia, pyæmia, and interfere with the healing of wounds, pray tell me what is the use of going to the trouble of even so much as to wash off the parts with unboiled slough or hydrant water? Why wash at all, the instruments, the hands, the part to be operated on, the wound or anything whatever? Those individuals who are feebly endeavoring to block the wheels of progress in antiseptic surgery are willing to concede that there has been a wonderful drop in the mortality of accidental and operative wounds within the last twenty years. And to what do they attribute this grand result? Is it possible that ablutions with slough water and the "dry dressing" should have all the credit? If so matters are much simplified. It occurs to me that most all those members of the profession who talk about cleanliness in contradistinction to antiseptic surgery, or cleanliness as constituting the sum and substance of antiseptic surgery, are frequently playing upon words. They boil the water they use; their sponges have been soaked in a chemical agent; their instruments have been carefully washed and dipped into a chemical agent, or passed through the blaze of a spirit lamp; hands carefully abluted in a chemical agent, etc. It is quite likely they will eschew carbolic acid because that would give them away, and some friend might ask why they had taken up that "exploded Listerism?" But the moment it is conceded that scrupulous cleanliness is essential in wound treatment, it is conceded that there is something very important to be kept out of wounds. What do the quibblers call this important something? Is it simply inert dirt, or is it something that possesses vitality and can multiply in the wound? Is there any so bold as to say it is not an organic germ? But says the doctor, "If microörganisms were the cause of the unfavorable results of wounds . . . the so-called germicides, to be efficient, would likewise destroy the patient." The author is not clear as to whether there are any germs "inimical" to wounds, but is quite clear that there is no agent that will destroy them without destroying the patient; yet he advises the most scrupulous cleanliness, and for what, and how? The doctor intimates that if there are germs in the air there are more in the water, hence the necessity of keeping water away from the wound and applying the dry dressing. So it is not clear that he even uses slough water for cleansing purposes. What liquid is it?

It has been settled long since that there can be no such thing as fermentation, decomposition, septicæmia or pyæmia in the absence of bacteria, and in presence of this fact why should any one use the language, "If microörganisms were the cause of the unfavorable results of wounds?" If not bacteria, what are you endeavoring to keep out of the wound? Why do you close the wound, perfectly coapt the surfaces and apply pressure to keep them so? Why not close the wound with the interrupted suture and leave it then exposed to the air—would not this keep it dry enough? Why do you want the wound hermetically sealed, as it were? These are all pertinent questions.

I am not contending against the practice of perfectly coapting the surfaces of a freshly made, cleanly cut, aseptic, operative wound, and applying a dry aseptic or antiseptic dressing, if you please, to said wound, with sufficient pressure to keep those surfaces in perfect apposition and exclude all atmospheric germs. This is Listerism, this is antisepticism. But let us not hear the remark that the germ theory of the poisoning of wounds is a myth, and that there are no methods known to science by which said germs can be destroyed or kept from poisoning wounds without at the same time destroying the life of the patient. Men who practice surgery on the last mentioned principles, at the present day, had better be sure that their numerous cases of death from septicæmia and pyæmia do not come up for adjudication in the courts, for they would surely be held accountable for malpractice.

A. C. SIMONTON, M.D.

San Jose, Cal., July 12, 1890.

NECROLOGY.

Willis F. Westmoreland, M.D.,

It is with mournful heart that we chronicle the death on the 27th of June, of Dr. Willis F. Westmoreland, of Atlanta. We feel that every reader of the *Journal* will join in our sorrow over the demise of this truly great man. For many years he has stood as a landmark to the profession of this and neighboring States, and his commanding figure has been as well known and as widely recognized as his splendid reputation as a surgeon and his unsurpassed skill as a diagnostician.

Dr. Westmoreland was born in Fayette county, Georgia, on the 1st of January, 1828. His early education was received in a neighborhood school of his native county, and was completed at a high school in Griffin, Ga. He attended his first course of lectures in the Medical College of Georgia, in 1848 and 1849. At the close of the latter year he entered as a student Jefferson Medical College, Philadelphia, from which he graduated in 1850 with a class of which Wm. H. Pancoast, S. Weir Mitchell and other eminent physicians were members.

Returning to Georgia he commenced the practice of medicine in his native county, but in July, 1851, removed to Atlanta, where he practiced successfully until the fall of 1852. At that

period he placed himself under the special instruction of Dr. Paul F. Eve, Professor of Surgery in the Medical Department of the University at Nashville, Tenn., where he remained eight months. In the winter of 1852 he visited Paris, and became an atttendant upon the lectures of Velpeau, Nelaton, Ricord and other eminent surgeons, for about two years. In 1854, while still in Paris, he was chosen Professor of Surgery in the Atlanta Medical College, a position which he held and whose duties he fulfilled to the day of his death. In 1855 he founded the *Atlanta Medical and Surgical Journal*, and was actively connected with its management for more than twenty years. At the time of his death he still held a position on its editorial staff. In 1856 he again visited Europe, and spent several months in Paris, perfecting himself in the art of surgery. On his return he located in Atlanta and rapidly built up a large and lucrative practice. When the war between the States came on, he offered his services to the Southern Confederacy, and they were promptly and cordially accepted. He served until the surrender at Appomatox, when he returned to Atlanta and resumed the practice of his profession. As the years rolled by his fame increased, until it extended to every State in the Union, and he came to be looked upon as the foremost surgeon of the South. For a few years before his death he was in feeble health, yet he remained at his post, and many a time arose from a bed of sickness to minister to the sufferings of others. When the hand of death was finally laid upon him, he went to his grave full of honors, and carrying with him the love, the respect and the admiration of all who knew him. He leaves a son, Dr. Willis F. Westmoreland, Jr., and a daughter, Mrs. John Rommel, of Philadelphia, to mourn a loss which to them is as irreparable as it is to the profession and to the community in which he lived. Editorial, *Atlanta Medical and Surgical Journal.*

Charles Linaeus Allen, M.D.

Dr. Charles Linaeus Allen died suddenly of apoplexy at Rutland, Vt., on July 2, aged 70 years; was born in Brattleboro on June 21, 1820. He was graduated from Middlebury College in 1842, and from the Castleton Medical College in 1846. The deceased was a professor in Castleton Medical College before the war and afterwards became president of the institution. He left there, however, to accept the professorship of civil and military hygiene in the University of Vermont at Burlington. While there he went to the war and was appointed a member of the examining board of brigade surgeons, being associated with those celebrated physicians, Drs. Clymer and Brinton. He resigned the position in 1864. He was a member of the local board of pension examiners, and with the exception of the time during Cleveland's administration he had been connected with the board since the close of the war. In 1857 he was acting professor of chemistry and of materia medica in Middlebury College.

Dr. Allen was secretary of the State Board of Health, and had been connected with the board since its organization; he did a vast amount of work as secretary, for which he received no compensation. He edited the *Sanitary Visitor*, and did much valuable work in the interest of the health of the State.

The deceased was the first president of the Rutland Medical Club, an honored member of the Vermont State Medical Society, of the American Medical Association, the American Academy of Medicine, also the International Medical Association, always attending the meetings of each if it was possible to do so. He was an honorary alumnus of Rush Medical College of Chicago.

Dr. Allen was a gentleman in every sense of the word, quiet and unassuming in his manner, and a general favorite with all his acquaintances. He was highly esteemed by his professional brethren, who often sought his advice and counsel in difficult and obscure cases. His consulting practice was large throughout the State and often extended outside. He was possessed of rare common sense, logical and accurate in his conclusions, and regarded as an excellent diagnostician.

He was a brother of Prof. J. Adams Allen, LL.D., dean of Rush Medical College.

The Death of Sir Edwin Chadwick.

The death of the "Father of English Sanitation," Sir Edwin Chadwick, is announced as having taken place July 5, at the ripe age of 90 years, as a remote consequence upon an attack of the epidemic influenza sustained by him last winter. Chadwick was one of the best minds of his day and nation, the peer of many whose names are far more widely known. He began his labors in the sanitary field as early as 1832, and continuously busied himself therein during nearly sixty years. The achievements of his life's work are marvelous in their variety and success, and England, but especially the poor of England, owe Chadwick a debt of gratitude that never will be adequately paid. The little, trivial honor of knighthood was meted out to him, late in his life, as a recognition of his services in the saving of human life, the amelioration of the sufferings of children in factories, and other vast sanitary labors. This was the Government's estimate of his worth and works, but Chadwick found his most hearty welcome when he went among the medical men and health officers of England, as he often did, and he often expressed himself as feeling most "at

home" among medical men whenever he was permitted to discuss with them his favorite themes about the maintenance of the public health. It was only a few days before his death that he received a diploma of honorary membership from the New York Medico-Legal Society.

ASSOCIATION NEWS.

Report of Committee on Dr. Freire's Claim to have Discovered the Yellow Fever Germ.

To the Section on State Medicine of the American Medical Association.—Your Committee to whom the reports of Drs. Freire and Sternberg were referred for an expression of opinion on the present status of Dr. Freire's claim to have discovered the yellow fever germ, and his ability to prevent the disease by inoculation, respectfully report that Dr. Freire's professed discoveries still need verification. That Dr. Sternberg appears to have made a diligent and experimental study, thoroughly going over the whole ground of Dr. Freire's experiments with such particularity as to carry conviction to the mind of your Committee that the germ of yellow fever is yet to be discovered.

A. N. BELL, M.D.,
R. RUTHERFORD, M.D.,
C. A. LINDSLAY, M.D.
Committee.

May 21, 1890.

MISCELLANY.

LETTERS RECEIVED.

Dr. A. R. Small, Chicago; Dr. W. B. Harrison, Columbia, Tenn.; Dr. F. J. Groner, Big Rapids, Mich.; Dr. M. L. Somers, Altoona, Kan.; Dr. J. H. Devor, Fort London, Pa.; Dr. A. W. Sidney, Fitchburg, Mass.; Dr. W. A. Dietrich, Lookout Mountain, Tenn.; Farwell & Rhines, Watertown, N. Y.; Dr. F. King, Dr. T. H. Manley, New York; Dr. Henry O. Marcy, Dr. J. L. Williams, Boston, Mass.; F. Koeller, Pittsburg, Pa.; Dr W. H. H. Hnton, Baltimore, Md.; The Drevet Mfg. Co., New York; Dr. E. F. Brush, Mt. Vernon, New York; Dr. H. L. Watson, Hartford, Vt.; Dr. C. H. Bradley, Haverhill, Mass.; Dr. J. E. Boylan, Dr. W. W. Dawson, Dr. G. H. Goode, Dr. O. P. Holt: Cincinnati Polyclinic, The Cincinnati Gravure Co., Cincinnati; Dr. J. C. Lange, Pittsburg, Pa.; Dr. J. T. Ball, Judson, Ind.; Dr. J. T. Wood, Toledo, O.; Dr. J. C. Hoag, Chicago; Dr. B. E. McKenzie, Toronto, Can.; Dr. A. C. Simonton, San Jose, Cal.; Parke, Davis & Co., Detroit, Mich.; Dr. O. T. Maxon, S. Evanston, Ill.; Dr. D. Streett, Baltimore, Md.; West. Penn. Med. College, Pittsburg, Pa.; The Medical Herald, St. Joseph, Mo.; Dr. W. F. Reynolds, York, Neb.; Dr. J. G. McDougal, New Lexington; Dr. T. L. Wright, Bellefontaine, O., Miner & Elbreg, Indianapolis, Ind.; Dr. Cephas Park, Oquawka, Ill.; J. Astier, Paris, France; Dr. J. B. Matteson, Brooklyn, N. Y.; Dr. E. E. Montgomery, Philadelphia; J. P. Kaster, Albuquerque, N. M.; Dr. T. L. Wright, Bellefontaine, O.; New Orleans Publishing Co., New Orleans, La.; Maltine Mfg. Co., J. H. Bates, Dr. R. B. James, Dr. J. A. Cutter, Dr. T. H. Manley, Dr. J. Shrady, New York; Battle & Co., St. Louis, Mo.; Dr. M. Gibson, Wilkes-Barre, Pa.; Chas. H. Fuller, Chicago Polyclinic, Dr. E. F. Ingals, Chicago; Thompson S. Westcott, Dr. E. E. Montgomery, Philadelphia; Dr. Jonas M. Cleland, Sioux City, Ia.; Doliber, Goodale & Co., Boston, Mass., Dr. B. L. Hovey, Rochester, N. Y.; Pantagraph Printing and St'y Co., Bloomington, Ill; Dr. N. Senn, Kiel, Germany; Allen & Yates, Buffalo, N. Y.; Dr. Wm. Porter, St. Louis, Mo.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from July 12, 1890, to July 18, 1890.

Capt. William H. Arthur, Asst. Surgeon, is granted leave of absence for three months, to take effect September 15, 1890, or as soon thereafter as his services can be spared. By direction of the Secretary of War. Par. 1, S. O. 160, A. G. O., Washington, July 11, 1890.

Capt. Louis M. Maus, Asst. Surgeon, leave of absence on surgeon's certificate of disability granted in S. O. 4, January 6, 1890, from this office, is extended six months on account of sickness. By direction of the Secretary of War. Par. 16, S. O. 160, A. G. O., Washington, July 11, 1890.

Col. Charles Page, Asst. Surgeon-General, Medical Director of the Department, is granted leave of absence for one month, to take effect on the 30th inst. Par. 3, S. O. 91, Dept. of the Missouri, St. Louis, Mo., July 14, 1890.

Capt. William H. Corbusier, Asst. Surgeon, is granted leave of absence for four months, on surgeon's certificate of disability, with permission to leave the Div. of the Missouri. By direction of the Secretary of War. Par. 4, S. O. 162, A. G. O., Washington, July 14, 1890.

Capt. John L. Phillips, Asst. Surgeon, is granted leave of absence for two months. By direction of the Secretary of War. Par. 4, S. O. 164. A. G. O., Hdqrs. of the Army, Washington, July 16, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending July 19, 1890.

Asst. Surgeon E. W. Auzard, detached from U. S. S. "Galena" and wait orders.

Surgeon A. C. Eckstein, granted leave of absence for month of August.

Medical Inspector T. N. Penrose, granted leave of absence for two weeks.

P. A. Surgeon A. G. Cabell, granted leave of absence for the month of August.

P. A. Surgeon Richard Ashbridge, granted one month's sick leave.

Surgeon T. C. Heyl, granted leave of absence for the month of August.

Medical Inspector Geo. H. Cooke, detached from Navy Yard, League Island, and to the "Pensacola."

Medical Inspector C. H. White, detached from the "Pensacola," proceed home and wait orders.

Medical Inspector A. A. Hochling, detached from Naval Hospital, Washington, and to League Island Navy Yard.

Medical Inspector H. M. Wells, detached from Museum of Hygiene and to Naval Hospital, Washington.

Asst. Surgeon James M. Whitfield, ordered to U. S. S. "Ajax" and other monitors.

Medical Inspector Theoron Woolverton, ordered to the U. S. S. "Philadelphia."

P. A. Surgeon P. A. Lovering, detached from the U. S. revenue str. "Wabash" and to the U. S. S. "Philadelphia."

Asst. Surgeon T. B. Bailey, detached from the U. S. S. "St. Louis" and to the U. S. S. "Philadelphia."

P. A. Surgeon S. S. White, ordered to the Marine Rendezvous, San Francisco, Cal.